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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 1

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June 1995

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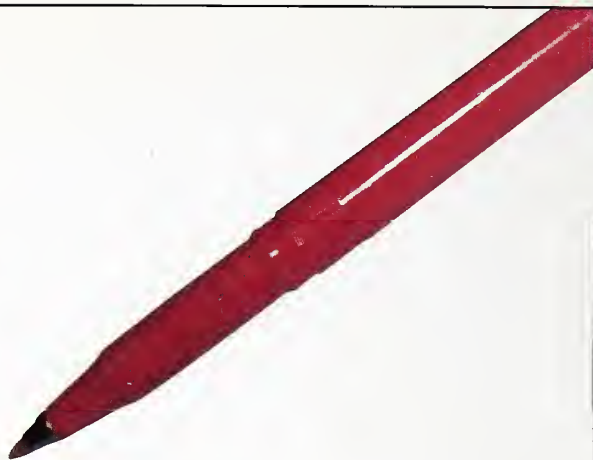
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Arkansas Medical Society President,
James Armstrong, M.D.,
and his wife Judy Armstrong

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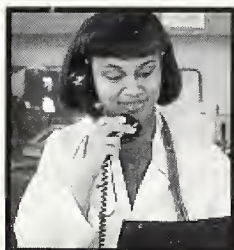
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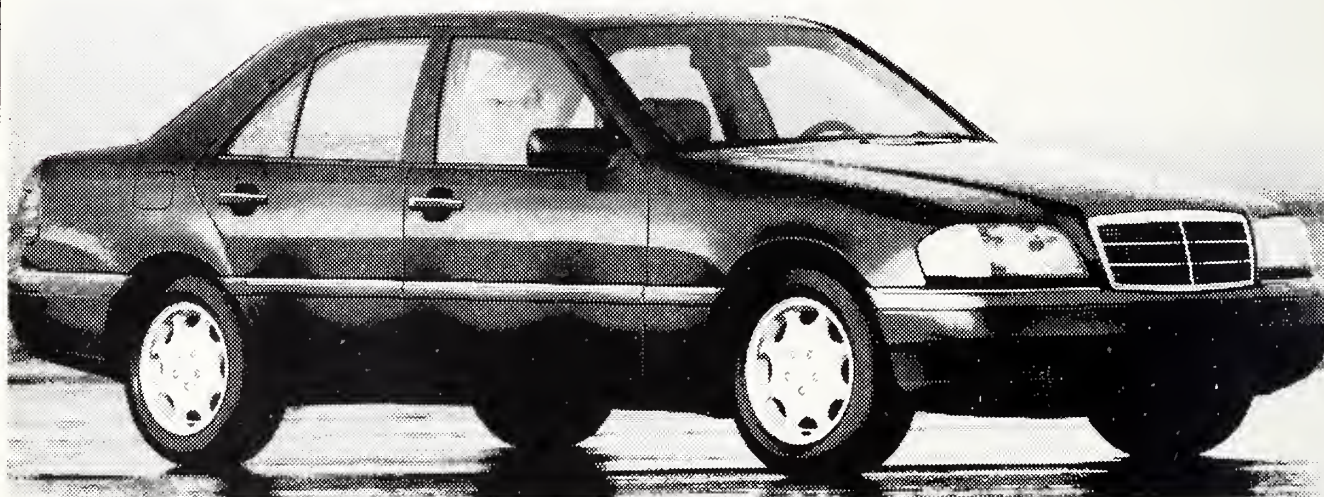
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James Armstrong, M.D.

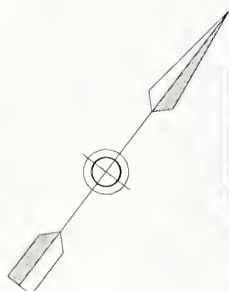
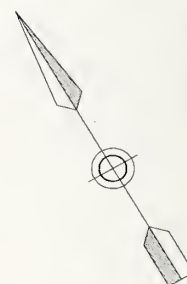
*1995-1996 President
Arkansas Medical Society
Ashdown, Arkansas*



**Dr. Armstrong
takes his oath of
office with Dr.
Kolb at his side.**



**Dr. Kolb turns the
gavel over to Dr.
Armstrong.**



**Dr. Armstrong
with his family.**



**Dr. Thomas Reardon of
the AMA congratulates
Dr. Armstrong.**



Inaugural Address

James Armstrong, M.D.
President 1995-1996

Charting the course. What an appropriate topic for us to address during this annual meeting. Few times in the history of medicine have we found ourselves in a more unsettled and stormy sea. Multiple forces, some of which are beyond our comprehension, are vigorously tossing us about. The tools of navigation which we have been trained to utilize seem, at times, totally inadequate to the task of righting the course and avoiding the shoals in these troubled waters. What must we do and how must we act to achieve and maintain a steady course so that the physician's ultimate purpose and commitment — the care of patients who are sick and in need — might be successfully accomplished?

In the late 1950's and early 1960's when I first began the study and the practice of medicine, life was quite simple by today's standards. The course was clear and well defined. We committed ourselves to caring for those in need. Our training was almost exclusively directed to that purpose. Little emphasis was given to politics, economics, or social changes. Technology was just beginning its amazing explosion. Most of us practiced singly or in small groups, and the economics of the practice was quite simple. Patients would choose a physician who responded to their needs as successfully and sympathetically as possible, and hopefully the physicians were paid by the patients for their efforts. The physicians were responsible to the patients and to themselves for the quality of care. Most were competent and ethical and took great satisfaction in their status as physicians. Few outside forces were influential in the doctor/patient relationship. The sea was calm, the course

was steady, and there was great fun, pleasure, and satisfaction to being a physician.

But even then storm clouds were appearing on the horizon.



The federal government was about to enter the medical field with a program called Medicare in response to a perceived social need. On the heels of Medicare would come a vast and complex array of edicts, rules, regulations, and bureaus, mostly formulated by persons who had little experience with, or knowledge of, the direct delivery of medical services. This plethora of regulations continues to balloon in ever increasing volume, making understanding difficult, and in some cases impossible, for both patient and physician.



Rapidly expanding knowledge and technology had begun to tax our ability to understand and fully utilize it. It brought with it social and ethical dilemma which demanded tough decisions which became more complex with each advance. How far do we go to extend life? What is the definition of quality of life? How do we determine candidates for extraordinary care? These are among the many issues we confront and must judge on an almost daily basis.



The expectations of patients were increasing for a multitude of reasons. Consequently, the direct or indirect influence of the legal profession began to affect our relationships to patients, our

methods of practice, and our decision making.

- ⊗ Most recently, delivery of health care has and is undergoing a major revolution. Managed care, HMO's, PPO's, capitation, and a host of corporate mergers have exploded on us. These are fueled by MBA's, attorneys, insurance executives, and corporate managers who have begun to direct and significantly influence our medical practice and judgments. Many of these new entities do not have the same motivation and goals for which we have been trained and to which we have dedicated our lives.

These are among the many currents and reefs through which we must find a way to navigate and chart a course into the future.

How do we cope with these influences? What must we do to survive as a profession and continue to perform the responsibilities for which we are committed? I do not pretend to have all the answers, but I have some thoughts and suggestions I would like to share with you.

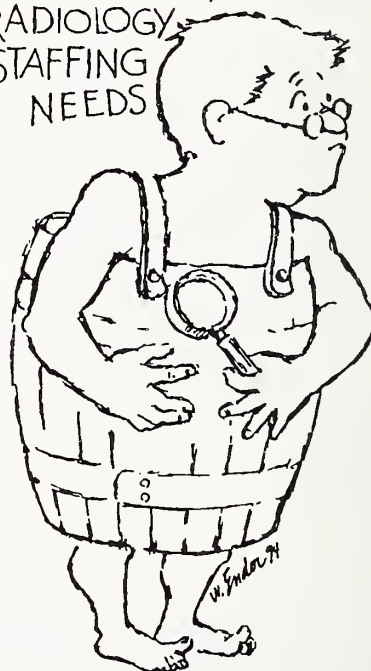
- ⊗ We must first accept change, use it and mold it to our advantage and credit in the quest for optimal care for our patients.
- ⊗ We must as a profession initiate and develop innovative and economical methods of health care delivery to provide access to all people who are in need.
- ⊗ We must continue to provide high quality in all medical services at reasonable cost but we must never jeopardize that quality because of cost or profit considerations.
- ⊗ We must participate in and maintain solid professional organizations and continue to influence public policy through the political process both locally and nationally, for we are the major advocates for our patients.
- ⊗ We must be willing to compromise and sacrifice some of our personal opinions and desires when the ultimate good to our patients and profession is in the balance.
- ⊗ We must continue our quest for quality education, both primary and post graduate. We must recruit the brightest and best of our youth to join this profession, for they are our future.
- ⊗ We must use the technological services which are presently available and will be forthcoming.

But we must never lose sight of the fact that, to quote Sir William Osler, "medicine is an art based on science."

- ⊗ Last, but most important of all, we must never lose sight of our major strength. We must remind ourselves of that which has made us strong, the deep personal commitment and responsibility to all patients who present to us their most valuable possession — their health and life. We must continue to protect and preserve this one-on-one relationship and responsibility which is unique to this profession and makes ours a most noble endeavor. We must wear many hats, but primarily, we must remain physicians in the true meaning of the word. In doing so, our navigation will remain true and our course will be clear.

Thank you for entrusting the helm of the Arkansas Medical Society to my care for this coming year. I humbly accept this great honor, and I will strive to represent you to the best of my ability. ■

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AMS President Profile



James Armstrong, M.D.

James Armstrong, M.D., a family practitioner from Ashdown, has been the director and a physician of the Ashdown Clinic since 1965 and Little River County Coroner since 1968. He is the Little River County Health Officer and vice chief of staff at Little River Memorial Hospital. In addition, he is an assistant clinical professor of family and community medicine at the University of Arkansas School of Medicine and a supervisor of student senior medical clerkships in family practice.

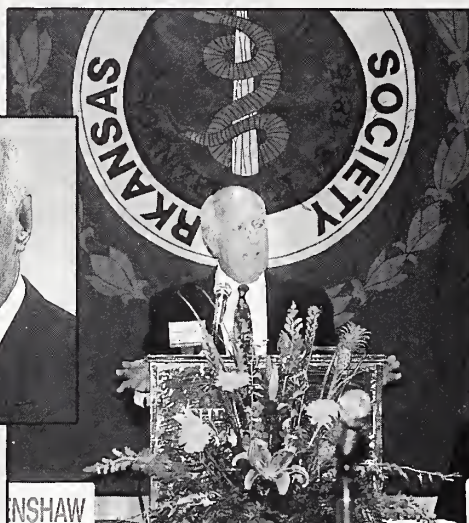
Dr. Armstrong earned a bachelor's degree with honors in chemistry from Hendrix College in 1957 and in 1961 graduated from the University of Arkansas School of Medicine. He completed a rotating internship at the Hillcrest Medical Center in Tulsa, Oklahoma in 1962, then went on to complete post-graduate studies at Peter Brent Brigham, in Boston, Massachusetts; Parkland Hospital in Dallas, Texas; the University of Kansas, in Kansas City; and the University of Arkansas in Little Rock.

In 1964, Dr. Armstrong earned his original certification from the American Board of Family Practice. He earned re-certification in 1970, 1976, 1982 and 1990.

As a member of the AMS, Dr. Armstrong has served as councilor of the sixth district, chairman of the finance committee and director of MED-PAC, the organization's political action committee. He is a charter member of the American Academy of Family Practice and the Arkansas Academy of Family Practice, where he also is a past director.

He served on the Arkansas Foundation for Medical Care's board of directors from 1980 to 1994 and as chairman of the review committee from 1990 to 1994. He has served as an Arkansas delegate to both the American Medical Peer Review Association and the Tri-Regional Review Conference.

1995 Convention Keynote Speakers



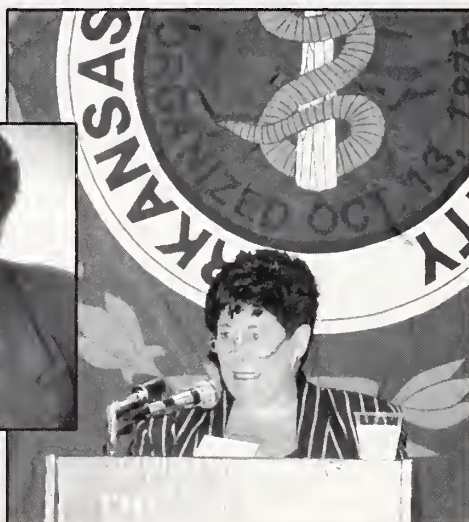
Keynote Address

Edward R. Annis, M.D., author of *Code Blue: Health Care in Crisis* and past president of the American Medical Association and the World Medical Association, was the keynote speaker at the opening session, Thursday, May 4. He offered a comprehensive look at the free market alternative to the health care system that would restore the traditional doctor/patient relationship.



Shuffield Lecture

Lee J. Stillwell of the American Medical Association was the featured speaker at the Shuffield Luncheon on Friday, May 5. He has directed the Washington activities of the AMA since joining in 1987. His responsibilities include the oversight and direction of the AMA's corps of Congressional and Administration lobbyists and its press operations.



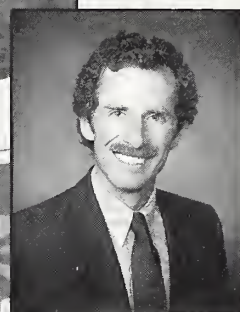
1st Feature Session

Dr. Lenore E.A. Walker, a licensed psychologist and President and Chief Executive Officer of Walker & Associates, a Denver based consulting firm providing clinical and forensic psychological services around the world, spoke about "Battered Women Syndrome: Identifying & Treating Survivors" at the First Feature Session on Friday, May 5.

1995 Convention Keynote Speakers

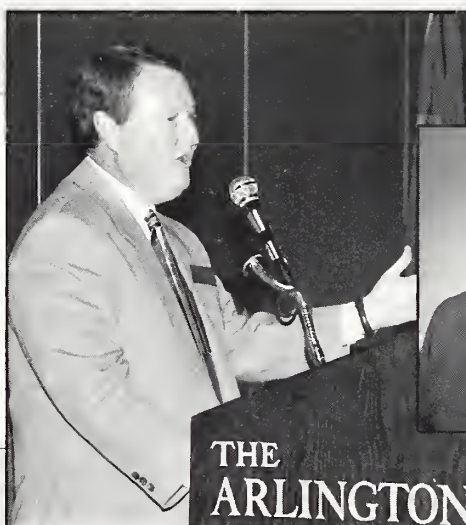
2nd Feature Session

Barry Chaiken, M.D., M.P.H., Director for Clinical Marketing at GMIS, Inc., spoke about "Practice Parameters" on Friday, May 5. With over twelve years experience in medical research, health care consulting, new business development, epidemiology and public health, he provides medical leadership and strategic planning support for GMIS products and services.



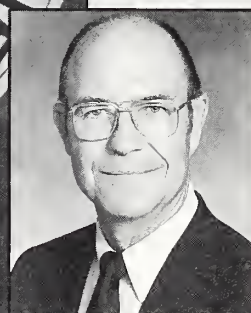
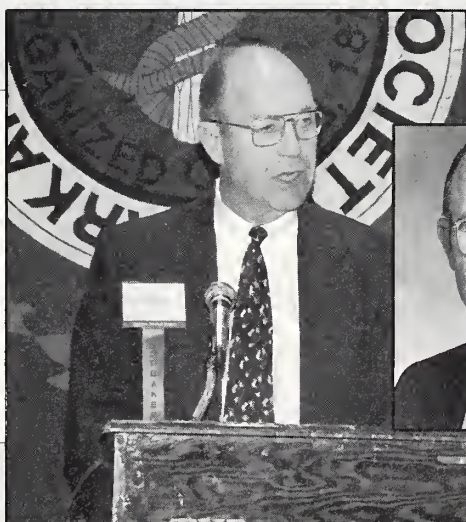
3rd Feature Session

Z. Lynn Zeno, AMS Director of Governmental Affairs, updated the membership on the activities of the 80th General Assembly on Saturday, May 6. In addition, he discussed how legislative changes will affect the practice of medicine in the State of Arkansas. Insurance regulations, medical records and Medicaid were some of the issues discussed and acted upon by the state legislature.



AMA Address

Thomas R. Reardon, M.D., Secretary/Treasurer, Member of the AMA Board of Trustees, gave the keynote AMA address at the Final House of Delegates on Saturday, May 6. Dr. Reardon is a general practitioner from Portland, Oregon, and was elected secretary/treasurer of the AMA in 1994. He recently testified before the New Mexico senate committee against the "Death With Dignity Act." Read more about his testimony on page 577 of the April 1995 issue of *The Journal*.



1995 Arkansas Medical Society Annual Session

	Officers	First Session	Second Session
Speaker	John Crenshaw	present	present
President	James M. Kolb, Jr.	present	present
President-elect	James Armstrong	present	present
Vice President	Scott Dinehart	-	-
Secretary	Charles Rodgers	present	present
Treasurer	Lloyd Langston	present	-

	Councilors		
District 1:	Don Vollman	present	present
	Dwight Williams	present	present
District 2:	Lloyd Bess	present	present
	Michael Moody	present	present
District 3:	Hoy B. Speer, Jr.	present	present
	P. Vasudevan	present	present
District 4:	Anna Redman	present	present
	Paul Wallick	-	present
District 5:	Wayne Elliott	present	present
	Robert Nunnally	present	present
District 6:	George Finley	-	-
District 7:	Thomas Hollis	-	-
	Robert McCrary	-	-
District 8:	David Barclay	-	-
	Joseph Beck	-	present
	Paul Cornell	present	present
	William Jones	present	present
	Charles Logan	present	present
	Jerry Mann	present	present
	J. Mayne Parker	present	present
	John L. Wilson	present	present
District 9:	David Davis	present	-
	Robert Langston	present	present
	Janet Titus	present	present
District 10:	Gerald Stolz	present	present

	Officers	First Session	Second Session
District 10:	Paul Wills	-	-
	Morton Wilson	present	present

	Past Presidents		
1979-1980	A. E. Andrews, Jr.	present	present
1971-1972	Stanley Applegate	-	-
1993-1994	Glen F. Baker	present	present
1985-1986	John P. Burge	present	present
1983-1984	Asa A. Crow	present	present
1964-1965	C. Randolph Ellis	present	-
1969-1970	Ross E. Fowler	-	-
1951-1952	Charles Henry, Sr.	-	-
1982-1983	Morris M. Henry	-	-
1988-1989	John M. Hestir	present	present
1990-1991	William N. Jones	-	-
1987-1988	W. Ray Jouett	-	-
1876-1977	Albert S. Koenig, Jr.	present	present
1977-1978	W. Payton Kolb	present	present
1980-1981	Kemal E. Kutait	-	-
1992-1993	J. Larry Lawson	present	present
1986-1987	Ken Lilly	-	-
Honorary	C. C. Long	-	-
1967-1968	Joseph A. Norton	-	-
1974-1975	Ben N. Saltzman	present	present
1981-1982	Purcell Smith, Jr.	-	-
1968-1969	H. W. Thomas	-	present
1975-1976	T. E. Townsend	-	present
1991-1992	George Warren	-	-
1989-1990	James R. Weber	-	-
1984-1985	Charles Wilkins, Jr.	-	-
1973-1974	John P. Wood	-	-
1978-1979	George F. Wynne	-	-

House of Delegates Composition

	Delegates	First Session	Second Session
Arkansas (1)	Marolyn Speer	present	-
	Dennis Yelvington	-	present
Ashley (1)	NOT REPRESENTED		
Baxter (2)	Robert Baker	present	present
	Peter MacKercher	-	-
Benton (4)	Richard Pearson	present	present
	Jan Turley	-	present
	C. Bruce Waldon	-	-
Boone (1)	Carlton Chamber	present	present
Bradley (1)	Joe Wharton	-	-
	Kerry Pennington	-	-
Carroll (1)	Oliver Wallace	present	present
Chicot (1)	NOT REPRESENTED		
Clark (1)	Noland Hagood	-	-

	Delegates	First Session	Second Session
Cleburne (1)	Jerry Thomas	present	present
	Mike Barnett	-	-
Columbia (1)	Thomas Pullig	-	-
Conway (1)	NOT REPRESENTED		
Craighead/ Poinsett (7)	Terrance Braden	-	-
	Tim Dow	present	present
	David Pyle	-	present
	David Silas	-	-
	Joe Stallings	present	present
	Don Vollman	present	-
	Joe T. Wilson	present	present
Crawford (1)	NOT REPRESENTED		
Crittenden (2)	G. Edward Bryant	-	present
	E. Scott Ferguson	-	present

House of Delegates Composition *(continued)*

	Delegates	First Session	Second Session
Cross (1)	Robert Hayes	-	-
Dallas (1)	Don Howard	-	-
Desha (1)	NOT REPRESENTED		
Drew (1)	Harold Wilson	present	present
Faulkner (2)	Randal Bowlin	-	-
	Ben Dodge	-	-
Franklin (1)	David Gibbons	present	present
Garland (6)	R. Paul Tucker	-	-
	James M. Arthur	-	-
	Fred Heinemann	-	-
	Gopakumar Maruthur	present	present
	Eugene Shelby	present	-
	Thomas Cofer	-	-
Grant (1)	Clyde Paulk	-	present
Greene/Clay (1)	Roger Cagle	present	present
Hempstead (1)	Lowell Harris	-	-
Hot Spring (1)	Absalom H. Tilley	-	-
Howard/Pike (1)	Robert Sykes	present	-
Independence (2)	William Waldrip	present	present
	John R. Baker	present	-
Jackson (1)	John D. Ashley	-	present
Jefferson (4)	Simmie Armstrong	-	-
	Sue Frigon	-	-
	David Jacks	present	present
	John Lytle	present	present
Johnson (1)	Don Pennington	present	-
Lafayette (1)	Bradley Harbin	-	-
Lawrence (1)	NOT REPRESENTED		
Lee (1)	NOT REPRESENTED		
Little River (1)	Joe G. Shelton	-	-
Logan (1)	John R. Williams	-	-
Lonoke (1)	Steve Thomason	present	-
Medical Student	Merisa Turner	present	-
Miller (3)	Joseph Robbins	-	-
	Herbert Wren	-	-
	Stanley Collins	-	-
Mississippi (1)	Joe V. Jones	present	present
Monroe (1)	NOT REPRESENTED		
Nevada (1)	Michael Young	present	-
Ouachita (1)	William Dedman	-	present
Phillips (1)	L.J. Pat Bell	present	-
	Francis Patton	-	present
Polk (1)	Thomas Tinnesz	present	present
Pope (3)	Kevin Beavers	present	present
	David Murphy	present	-
	Michael Riddell	-	present
Pulaski (37)	D. B. Allen	-	-
	Brad Baltz	-	present
	Ray Biondo	present	-
	Bob Cogburn	-	-
	Michael Cope	-	-
	David Coussens	-	-
	Philip Deer, III	-	-
	Marlon Doucet	-	-
	Thomas Eans	present	present
	Jim English	-	-
	Charles Fitzgerald	-	-

	Delegates	First Session	Second Session
	Jay Flaming	-	present
	Cynthia Frazier	-	-
	Fred Henker	present	present
	Reid Henry	-	-
	Steven Hodges	present	-
	Thomas Jansen	-	-
	Anthony Johnson	-	present
	Carl Johnson	-	-
	Gail Jones	-	-
	David King	-	-
	Dean Kumpuris	-	-
	Derek Lewis	-	present
	Marvin Leibovich	-	-
	Steve Magie	present	present
	Judy McDonald	-	-
	Fred Nagel	-	-
	George Norton	-	-
	Debra Owings	-	-
	Richard Peek	-	-
	Carl Raque	present	present
	John Redman	present	present
	Ashley Ross	-	-
	Ted Saer	-	-
	Bruce Schratz	-	-
	Frank Sipes	present	-
	William Steele	-	-
	Duane Velez	-	-
	Samual Welch	-	-
	Paul Zelnick	-	-
Randolph (1)	NOT REPRESENTED		
Saline (2)	Michael Schmidt	-	-
	Donald Harper	present	present
Sebastian (11)	Edwin Coffman	-	present
	Randy Ennen	-	-
	R. Cole Goodman	-	-
	Peter Irwin	present	present
	Greg Jones	-	present
	Robert Knox	-	-
	John Lange	-	-
	Jack Magness	-	-
	Eugene Still	-	-
	John Swicegood	-	-
	John Wells	-	-
Sevier (1)	NOT REPRESENTED		
St. Francis (1)	NOT REPRESENTED		
Tri-County (1)	Griffin Arnold	-	-
	Mike Moody	present	-
Union (2)	Wayne Elliott	present	present
	Allan Pirnique	-	-
Van Buren (1)	John A. Hall	-	-
Washington (7)	David Davis	-	present
	Curtis Hedberg	-	present
	Anthony Hui	-	present
	William McGowan	-	-
	William Nowlin	-	-
	Danny Proffitt	present	present
	Janet Titus	-	-
White (2)	NOT REPRESENTED		
Woodruff (1)	NOT REPRESENTED		
Yell (1)	James Maupin	-	present

House of Delegates

First Session - May 4, 1995



Speaker of the House John Crenshaw called the meeting to order on Thursday, May 4, 1995, at the 119th annual meeting of the Arkansas Medical Society. Delegates, members, and guests were welcomed by the mayor of Hot Springs, Helen Selig. Miss Hot Springs, Shari Payne sang the National Anthem. The Hot Springs Navy Junior ROTC presented the colors. Dr. Payton Kolb asked for a moment of silence in memory of the physicians, physicians' spouses, and Alliance members who had passed away in the past year.

Dr. Crenshaw introduced Mrs. Susan Paddack, Field Director, AMA Alliance; Mrs. Mary Ann Stallings, AMS Alliance President; and Mrs. Evelyn Thomas, AMS Alliance President-elect.

Mrs. Mary Ann Stallings presented Dr. I. Dodd Wilson, Dean, University of Arkansas College of Medicine, with two grants from the AMA Education and Research Foundation. The \$2,270.50 grant is intended for the pursuit of excellence in the medical school's programs and the \$6,849.05 grant is restricted to financial assistance for medical students.

Dr. Crenshaw announced there were 77 voting members in attendance.

Upon motion, the House approved the minutes of the 118th annual session as published in the June 1994 issue of *The Journal of the Arkansas Medical Society*.

Dr. Charles Logan presented a plaque to Dr. Don Vollman who served as councilor from 1993 to 1995. A plaque will be sent to Dr. David Rogers who served as councilor from 1989 to 1994.



Mary Ann Stallings presents Dr. Dodd Wilson with two grants from the AMA Education and Research Foundation. Evelyn Thomas, Susan Paddack and Dr. Kolb are also pictured.



Dr. Crenshaw, 1994-1995 Speaker of the House of Delegates

Dr. James M. Kolb, Jr., presented plaques to Dr. Charles Rodgers who served as Secretary to the Arkansas Medical Society from 1988 to 1995 and as Chairman of the Governmental Affairs Council from 1990 to 1995. A plaque will be sent to Dr. David Rogers who served as an alternate delegate to the AMA from 1991 to 1994.

Dr. Crenshaw announced the vacancies on the state boards and reminded the members in the counties in the districts and the Nominating Committee to meet immediately following the adjournment of the House to vote for three nominees for each vacancy. Vacancies will occur December 31, 1995 in the member-at-large position of the Arkansas State Medical Board and in District #3 and one member-at-large position of the Arkansas State Board of Health.

Dr. Crenshaw announced the 1995-1996 Nominating Committee members: District #1: Dr. Merrill Osborne, Blytheville; District #2: Dr. Daniel Davidson, Searcy; District #3: Dr. Francis Patton, Helena; District #4: Dr. Harold Wilson, Monticello; District #5: Dr. Robert Nunnally, Camden; District #6: Dr. A. E. Andrews, Texarkana; District #7: Dr. Kevin Hale, Hot Springs; District #8: Dr. John Wilson, Little Rock; District #9: Dr. Carlton Chambers, Harrison; and District #10: Dr. Gerald Stolz, Russellville.

Dr. Crenshaw announced that the Reference Committee meetings will begin at 9:00 a.m., Friday morning, May 5.

Dr. James M. Kolb, Jr., introduced the keynote speaker, Dr. Edward R. Annis. Dr. Annis, former president of the AMA and the World Medical Association and AMA Trustee spoke on "Medical Practice in Turmoil: What Lies Ahead?"

There being no further business the meeting adjourned until Saturday, May 6.

House of Delegates

Final Session - May 6, 1995



Speaker of the House John Crenshaw called the meeting to order on Saturday, May 6, 1995, and asked Dr. Carlton Chambers, Secretary of the Nominating Committee, to present the slate of officers:

President-elect: John Crenshaw, M.D., Pine Bluff
Vice President: Joe V. Jones, M.D., Blytheville
Treasurer: Lloyd Langston, M.D., Pine Bluff
Secretary: Mike Moody, M.D., Salem
Speaker of the House: Anna Redman, M.D., Pine Bluff
Vice Speaker of the House: Kevin Beavers, M.D., Russellville

Delegates to the AMA:

James Weber, M.D., Jacksonville (1/1/96 - 12/31/97)

Alternate Delegate to the AMA:

Larry Lawson, M.D., Paragould (1/1/96 - 12/31/97)

Councilors:

District 1: Joe Stallings, M.D., Jonesboro
District 2: Lloyd Bess, M.D., Batesville
District 3: Hoy Speer, M.D., Stuttgart
District 4: Anna Redman, M.D., Pine Bluff
District 5: Wayne Elliott, M.D., El Dorado
District 6: Michael Young, M.D., Prescott
District 7: Thomas Hollis, M.D., Hot Springs
District 8: Joseph Beck, M.D., Little Rock
Paul Cornell, M.D., Little Rock
William Jones, M.D., Little Rock
Charles Logan, M.D., Little Rock
Mayne Parker, M.D., Little Rock
District 9: David Davis, M.D., Fayetteville
District 10: Paul Wills, M.D., Fort Smith

Dr. John Crenshaw was elected president-elect by acclamation as were other nominees. The House of Delegates voted to elect Drs. Lloyd Langston, James Weber, Thomas Hollis, and Paul Wills in their absence.

Dr. Anna Redman, newly elected speaker of the House, presided over the remainder of the meeting. Dr. Redman presented a plaque to Dr. John Crenshaw for his service as speaker.

The next order of business was the reports from the Reference Committees. The adoption of these reports were approved and will be printed in the June

issue of *The Journal of the Arkansas Medical Society*.

The report of the Council was given by Dr. Charles Logan, Chairman, and approved by the House to be filed for information.

Dr. Redman announced the following nominees for the state board positions: Third Congressional District, Arkansas State Board of Health: Drs. James Crider, Harrison; David Murphy, Russellville; and Ken Lilly, Ft. Smith; Member-at-Large Position, Arkansas State Board of Health: Drs. Robert Miller, Helena; Harold Wilson, Monticello; and Howard Harris, Dumas; Member-at-Large Position, Arkansas State Medical Board: Drs. Linda McGhee, Fayetteville; J. R. Baker, Batesville; and Trent Pierce, West Memphis.

Dr. Redman also announced that Dr. Carlton Chambers, Harrison, had been chosen Chairman of the Nominating Committee and Dr. Gerald Stolz, Russellville, Secretary.

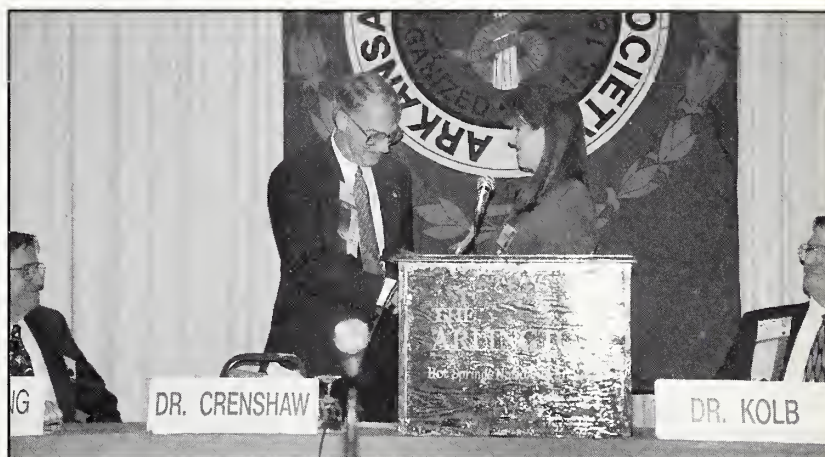
Janell Mason, Chief Operating Officer, gave a brief update on the AMS Managed Care Organization.

Dr. Charles Logan asked that the annual golf tournament be named the Harold D. Purdy Memorial Golf Tournament in memory of Dr. Bud Purdy who passed away unexpectedly prior to the annual meeting. Upon motion this was approved.

Dr. James M. Kolb, Jr., gave a farewell address to the members and guests. This address is printed in the June 1995 issue of *The Journal of the Arkansas Medical Society*.

Dr. Thomas R. Reardon, AMA Secretary/Treasurer and member of the Board of Trustees, addressed the House.

There being no further business the meeting adjourned.



Dr. Anna Redman, 1995-1996 Speaker of the House, and Dr. Crenshaw with Dr. Armstrong (far left) and Dr. Kolb (far right).

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James Armstrong, M.D., Ashdown, President
John Crenshaw, M.D., Pine Bluff, President-elect
Joe V. Jones, M.D., Blytheville, Vice President
James M. Kolb Jr., M.D., Russellville, Immediate Past President
Mike Moody, M.D., Salem, Secretary
Lloyd Langston, M.D., Pine Bluff, Treasurer
Anna Redman, M.D., Pine Bluff, Speaker, House of Delegates
Kevin Beavers, M.D., Russellville, Vice Speaker, House of Delegates

AMS Executive Committee Members

Charles W. Logan, M.D., Little Rock, Chairman
James Armstrong, M.D., Ashdown, President
John Crenshaw, M.D., Pine Bluff, President-elect
Mike Moody, M.D., Salem, Secretary
Lloyd Langston, M.D., Pine Bluff, Treasurer
James M. Kolb Jr., M.D., Russellville, Immediate Past President

Councilors and Councilor Districts

First District

Dwight Williams, M.D., Paragould (1996); Joe Stallings, M.D., Jonesboro (1997) - Clay, Craighead, Crittenden, Greene, Lawrence, Mississippi, Poinsett, Randolph

Second District

Lloyd Bess, M.D., Batesville (1997); Vacant (1996) - Cleburne, Conway, Faulkner, Fulton, Independence, Izard, Jackson, Sharp, Stone, White

Third District

Hoy B. Speer Jr., M.D., Stuttgart (1997); P. Vasudevan, M.D., Helena (1996) - Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Praire, St. Francis, Woodruff

Fourth District

Paul A. Wallick, M.D., Monticello (1996); Vacant (1997) - Ashley, Chicot, Desha, Drew, Jefferson, Lincoln

Fifth District

Robert Nunnally, M.D., Camden (1996) - Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita, Union

Sixth District

George Finley, M.D., Texarkana (1996); Michael Young, M.D., Prescott (1997) - Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk, Sevier

Seventh District

Thomas H. Hollis, M.D., Hot Springs (1997); Robert McCrary, M.D., Hot Springs (1996) - Clark, Garland, Grant, Hot Spring, Montgomery, Saline

Eighth District

Charles W. Logan, M.D., Little Rock (1997); Paul Cornell, M.D., Little Rock (1997); David L. Barclay, M.D., Little Rock (1996); R. Jerry Mann, M.D., Little Rock (1996); Joseph M. Beck II, M.D., Little Rock (1997); William N. Jones, M.D., Little Rock (1997); J. Mayne Parker, M.D., Little Rock (1997); John L. Wilson, M.D., Little Rock (1996) - Pulaski

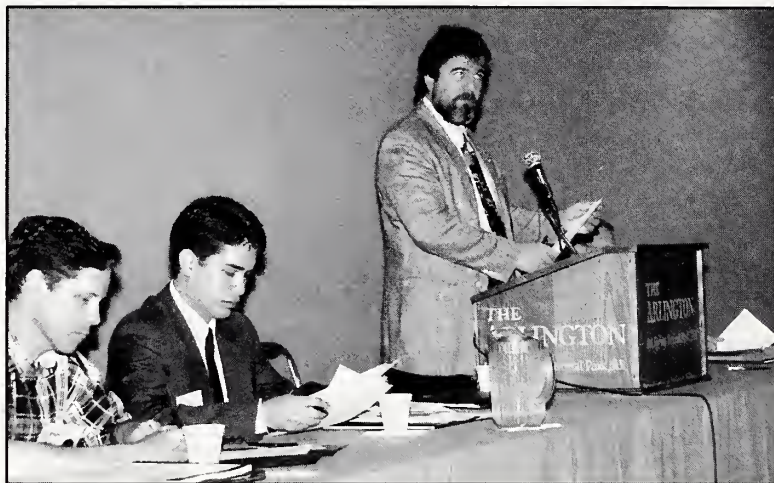
Ninth District

Robert H. Langston, M.D., Harrison (1996); Janet Titus, M.D., Fayetteville (1996); David Davis, M.D., Fayetteville (1997) - Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, Washington

Tenth District

Morton C. Wilson, M.D., Fort Smith (1996); Gerald A. Stolz, M.D., Russellville (1996); Paul I. Wills, M.D., Fort Smith (1997) - Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian, Yell

Reference Committee #1



Dr. Roger Cagle, Paragould, Chairman
Dr. Wayne Elliott, El Dorado
Dr. Reid Pierce, Pine Bluff
Dr. Donald Harper, Benton
Michael Nolen, Medical Student Representative

This Reference Committee carefully reviewed and discussed the following reports printed in the April issue of *The Journal of the Arkansas Medical Society*:

Arkansas Health Care Access Foundation, Dr. Harold Hedges, President
Arkansas Medical Society 1995 Budget, Dr. Dwight Williams, Chairman
Ouachita County Medical Society, Dr. Robert Nunnally, Secretary
Council, Dr. Charles Logan, Chairman
Tri-County Medical Society, Dr. George Jackson, Secretary/Treasurer
Young Physicians' Committee, Dr. Anna Redman, Chairman

HOUSE ACTION: FILED FOR INFORMATION

This Reference Committee gave careful consideration to the following items and request that they be considered separately:

Annual Session Committee **Dr. Jerry Mann, Chairman**

This Reference Committee recommends that the report of the Annual Session Committee be filed for information; **AND THAT**

Dr. Mann and the Committee be commended for planning these outstanding programs; **AND THAT** every attendee make a conscious effort to encourage their colleagues to attend future programs.

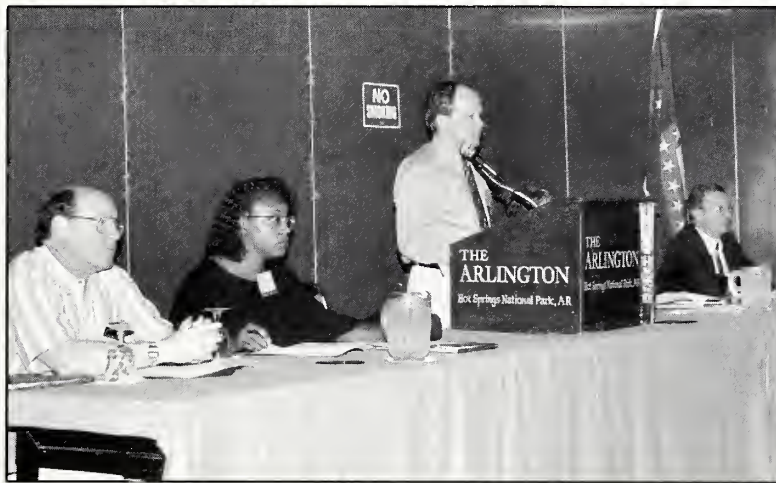
Executive Vice President Report **Ken LaMastus, Executive Vice President**

The Committee took special note of the fact that the Arkansas Medical Society has become much more than our professional association. It is involved in a variety of areas including foundations, managed care, health insurance, and more; all of which are for the express purpose of representing physicians and their patients. This Reference Committee recommends that the report of the Executive Vice President be filed for information; **AND THAT**

Mr. LaMastus and the entire staff be commended for their efforts.

This concludes the report of Reference Committee #1. Dr. Roger Cagle, chairman of the committee, wishes to thank those who appeared before the Committee, members of the Committee, and Nadine Gentry of the AMS staff for her assistance.

Reference Committee #2



Dr. Steve Magie, Little Rock, Chairman
Dr. Wesley Ashabranner, Heber Springs
Dr. Joe Jones, Blytheville
Dr. Parthasarathy Vasudevan, Helena
Dr. Erma Washington, Pine Bluff
Brian Meyer, Medical Student Representative

This Reference Committee carefully reviewed and discussed the following reports printed in the April issue of *The Journal of the Arkansas Medical Society*:

Arkansas State Medical Board, Peggy Pryor Cryer, Chairman
CME Accreditation Committee, Dr. Steve Strode, Chairman
Medical Education Foundation for Arkansas, Dr. Martin Eisele, President
Medical Services Review Committee, Dr. John Crenshaw, Chairman
Pulaski County Medical Society, Fred Reddoch, Executive Director

HOUSE ACTION: FILED FOR INFORMATION

This Reference Committee gave careful consideration to the following items and request that they be considered separately:

AMS Management Company
Janell Mason, Chief Operating Officer

This Reference Committee recommends that the report of the AMS Management Company be filed for information; **AND THAT**

Mrs. Janell Mason be commended for her efforts.

Arkansas Department of Health
Dr. Sandra Nichols, Director

This Reference Committee recommends that the report of the Arkansas Department of Health be filed for information; **AND THAT**

Dr. Sandra Nichols be commended for her efforts.

Physician's Health Committee
Dr. Joe Martindale, Chairman

There was a great deal of discussion about the awareness of this important committee and the need to provide additional information to AMS members. This Reference Committee recommends that the report of the Physician's Health Committee be filed for information; **AND THAT**

Dr. Joe Martindale be commended for his hard work and dedication in support of our colleagues; **AND THAT**

Once additional funding is available, the Arkansas Medical Society continue to enhance its efforts in educating members about the program and the assistance available through this important program; **AND THAT**

Arkansas Medical Society members be advised of the statistical successes of the program in future committee reports.

This concludes the report of Reference Committee #2. Dr. Steve Magie wishes to thank those who appeared before the Committee, members of the Committee, and Tina Wade of the AMS staff for her assistance.

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Report of the Council

May 4-5, 1995



The Council met on May 4 and 5 and the following business was received and transacted:

1. The Council approved the minutes of the February 19, 1995 Council meeting and the April 26, 1995 Executive Committee meeting.
2. Mr. Mike Mitchell discussed the Patient Protection Act of 1995, also known as the Any Willing Provider Act. Lynn Zeno was recognized for his work in helping get this act passed.
3. Dr. William Jones gave an update of his campaign activities for the position on the AMA Council on Scientific Affairs. Dr. Jones asked the Council to write their colleagues in other states and encourage them to support him.
4. Upon motion the Council voted to write a letter to the Oklahoma Medical Society expressing sympathy for the recent tragedy in Oklahoma.
5. David Wroten presented a \$53,333 check to the Council for payment of a loan that the Arkansas Medical Society made to the AMS Health Benefit Plan.
6. The Arkansas Medical Society Membership and Budget Reports were presented for information.
7. Audits for the Arkansas Medical Society and the Medical Education Foundation for Arkansas were presented for information.
8. The Council approved changes to the Arkansas Medical Society Alliance Bylaws.
9. The Council voted to establish a Physicians Health Foundation to manage the money that will be distributed from the increase in physician licensure fees that was passed during the recent legislative session. This plan will then be presented to the Council for final approval.
10. The Council approved a contribution equal to \$1.00 per each dues paying member to the AMA's State Medical Society Litigation Center and \$2,000 toward current Washington efforts for medical liability reform.

11. Nancy Kintzel of the American Medical Association greeted the Council and gave a brief update on their activities.
12. The Council approved requests for dues exemption for life, emeritus, and affiliate membership.

Life Membership:

William J. Wright
Carl E. Hyman
Raymond A. Irwin, Jr.
J.R. Pierce, Jr.
Charles C. Brock, Jr.

Merrill J. Osborne
A. Tharp Gillespie
A. Vale Harrison
Frank M. Westerfield, Jr.
A. C. Bradford

Emeritus Membership

Robert C. Ford, Jr.
Asa A. Crow
Bobby Jenkins
Mary Ellen Jenkins
Herbert B. Wren
Herbert Jones
Warren C. Boop, Jr.
Marion M. Church
Kingsley W. Cosgrove, Jr.

J.B. Cross
Stevenson Flanigan
Bill G. Floyd
Arlee E. Pollard
Quin M. Baber
Willis M. Stevens, Jr.
James Beckman, Jr.
C. Dwight Dodson

Affiliate Membership

Helga E. Chock
John W. Jacks
Patrick K. Keane
James Lowry
Gary S. Sapiro
Robert E. Burns
William R. Mashburn
Norman W. Peacock, Jr.

William J. Roberts
Donald G. Browning
Guy R. Farris, Jr.
George M. Goza, Jr.
J. Harry Hayes, Jr.
Raines Chaffin
Joseph H. McAlister

13. The Council directed a letter be written to Robert Anderson, DDS, for his outstanding service to the Medical Services Review Committee.
14. Dr. Robert McCrary discussed problems surfacing in Garland County relating to managed care



1995-1996 Council of the Arkansas Medical Society

and relationships with the Arkansas Medical Society. Other Council members expressed concerns relating to managed care issues. The Council approved the appointment of an ad hoc committee to work with the AMS staff to address our meeting the needs and concerns of physicians involved in managed care.

15. Dr. Robert Fiser presented a model plan for a health care data system in Arkansas to address accessibility, accounting, and affordability. The Council directed Dr. James Armstrong to further investigate the project and report to the Council with more information.
16. The Council made the following appointments:

Budget Committee:

Parthasarathy Vasudevan, Helena

Journal Editorial Board:

UAMS Position, Alex Finkbeiner, Little Rock

Pension Plan Board of Trustees:

Mayne Parker, Little Rock

Medical Education Foundation for Arkansas:

reappointed Gerald Stolz, Russellville

Committee on Position Papers:

reappointed Dennis Jacks, Pine Bluff

Roger Cagle, Paragould, Chairman

David Davis, Fayetteville

Michael Young, Prescott

Young Physicians Committee:

Noland Hagood, Arkadelphia (District #7)

H. Jerrel Fontenot, Little Rock (District #8)

David Murphy, Russellville (District #10)

Medical Services Review Committee:

General Surgery: Pat Dolan, Hot Springs

Allergy: Kelsy Caplinger, Little Rock

Dermatology: Peter Singer, North Little Rock

Otolaryngology: Graves Hearnberger, Little Rock

Ophthalmology: Richard Henry, North Little Rock

Radiology: James McDonald, Little Rock

MSRC Subcommittee of Subspecialties:

Cardiovascular Surgery: reappointed William Fiser, Little Rock

Gastroenterology: reappointed John Baber, Little Rock

Oral Surgery: Edward Cooper, DDS, Hot Springs

Physicians' Advisory Committee to Medicare:

Allergy: Kelsy Caplinger, Little Rock

Cardiovascular Diseases: reappointed Anthony Bennett, Little Rock

Dermatology: reappointed Scott Dinehart, Little Rock

Hematology: reappointed Tony Flippin, Fort Smith

Oncology: reappointed Joseph Beck, Little Rock

Otolaryngology: Graves Hearnberger, Little Rock

Physical Medicine and Rehabilitation: reappointed Barry Baskin, Little Rock

Radiology: reappointed John Joyce, Little Rock

Therapeutic Radiology: Loverd Peacock, Jonesboro



1995-1996 Arkansas Medical Society Council Officers



Farewell Address

James M. Kolb, Jr., M.D.
President 1994-1995

Dr. Redman, Dr. Armstrong, Dr. Crenshaw, Dr. Reardon, distinguished guests, members of the House of Delegates, ladies and gentlemen.

For medicine, and our society, it has been an eventful year. You, the members have made it a successful year.

Health Care system reform. Do you remember what we were facing at this time last year? The United States Congress had before it many onerous proposals for national health care system reform. Through the efforts of doctors, and their medical societies across the country these proposals died in Congress... A great victory for the American people.

We now have a chance for incremental health care system reform. Make no mistakes...we need reform.

And next, as you recall, was the referendum on the two cent tax per bottle of soda pop, dedicated to Medicaid. Again, you must be proud of yourselves for you success! You took on the "Cola Cartel" and won the victory in November.

And then the Arkansas legislature met in Little Rock, as it does every two years. Once again you rallied to the call for the Patient Protection Act of 1995 sponsored by Senator Gwatney. Under his able guidance, the doctors back home, with their patients, won an unprecedented victory against a very well financed campaign to defeat the bill.

There was one vote cast in each house against the bill, and a reluctant governor signed the bill. This was made possible by the leadership of Lynn Zeno of the Governmental Affairs Department of the Arkansas Medical Society, and our dedicated staff. All of you back at home did your homework. I am very proud of

you!

There are many more political accomplishments, but you have already heard of those from Mr. Zeno.

All the while, our Arkansas Medical Society Managed Care Organization has been growing and growing. There are almost eighteen hundred physician members, and twenty local managed care organizations. We now have thirty-one hospitals under contract to serve patients for our managed care organization.

Under the direction of Janell Mason, you have an established managed care organization, which is an alternative for employers. It has not been easy and has taken time.

The network of physicians is the second largest in Arkansas. You, the Arkansas Medical Society, own it! This managed care organization is a valuable asset.

I've spent much of my time this year traveling on behalf of our managed care organization. I assumed the chairmanship of the board when Dr. Glen Baker resigned that position last year. I am very proud to be a part of this organization. It's your organization! In order for it to flourish you must continue to support it.

Our business in Washington is not finished.

At the present time incremental health care system reform, is being moved, by Congress, from the back to the front burner.

The major issue today is the control of the delivery of medicine, unfortunately not quality care and not the amount of money spent on health care.

Antitrust reform must occur - physicians must have a level playing field in order to organize effectively as insurance companies have done.

We need to have the same exemptions as the

McCarran-Ferguson Act of 1946 gives the insurance companies or rescind the McCarran-Ferguson Act, which benefits only the insurance industry. We need a level playing field now!

The House of Representatives passed a cap of \$250,000 on non-economic damages in a bipartisan Cox-Geren Amendment, which was added to the Common Sense Product Liability and Legal Reform Act. This is the same non-economic cap as California has under MICRA.

Currently, 2% of the malpractice cases nationwide, through non-economic awards, make up 60% of the cost of professional liability. This would have been a great step in the right direction for the Senate to have passed the same limitation on non-economic awards, but they did not. We must await the joint conference committee report. We lost the battle but not the war. Please follow this issue closely. Further instruction will follow.

Medicare must be reformed. Continued cuts in reimbursement to providers are insufficient to make up the needed funds to keep Medicare solvent more than two to three years.

Congress will have to deal with this very difficult problem. The fast and simple solution previously used was to cut providers reimbursement. This approach will not solve the financial crisis this time. When Medicare was passed there was no indexing on increase in age of its recipients, which has turned out to be the "Achilles heel" for this program. When it was instituted in 1966, some 29 years ago, the average longevity of an adult male was approximately 58 years.

Twenty-nine years later the life expectancy is approximately 20 years more. In addition to the roll back for age of eligibility, Congress will have to coordinate this with other programs. No longer will 65 years of age be so magic.

There are problems with access for Medicare patients today, even in Arkansas. This problem could be alleviated, almost immediately, by allowing the patient to pay a minimum access fee.

A phased-in system of medical savings accounts, could be a great benefit for relieving the stress on Medicare's financial crisis.

Sending Medicare patients into HMO's and PPO's is not the answer to the financial problem of the program. Cherry picking of younger, healthier recipients

will occur. HMO's do well financially as long as there is growth of membership. At maturity there is only one option to stay financially viable - The big "R" word - rationing of care.

Graduated income testing must be a part of Medicare reform. Insurance reforms, which include portability and community rating, can be passed this year. Democrats and Republicans do agree these changes are needed.

Clinical Laboratory Improvement Amendment of 1988, or CLIA 88, one of the most onerous pieces of legislation that has come from Congress in recent years, has the possibility of being done away with through the dismantling of government regulations. This has not benefited our patients. Now is the time to write those letters to congress regarding your recommendations for CLIA 88.

During this past year, I have had the opportunity to attend, as your president, the annual session of the American Medical Association in Chicago, the Interim meeting of the American Medical Association in Hawaii and the leadership conference in Washington, D.C.

I would like to convey to you the dedication that your leadership in the AMA exhibits as they do their jobs as your lead-

ers, and act as your voice to the nation for all physicians, whether they are members or nonmembers.

For those of you who are members and are pulling the wagon, I congratulate you! Your dues are well spent. For those that are getting a free ride you need to get out and pull with the rest of us. We all have the same goals; to provide the best medical care possible for our patients at a reasonable cost.

We are all proud of our profession. We should all be united in expressing this message, not only within our state, but throughout the nation.

The AMA has recently undertaken a project to look at its structure to see that it is serving its membership as it should. I am sure you will hear more about that from Dr. Reardon.

One of the recommendations is to try to get more AMA leadership in direct contact with members of the state and county medical societies.

There is an organization, the Organization of State Medical Society Presidents, OSMAP, which meets prior to each AMA Annual and Interim Session. This is a discussion group. The session is lead by an elected



president from the group of presidents and past presidents. Numerous topics are discussed. The AMA Board of Trustees attends. This gives the opportunity for every state society president to be heard by the Board of Trustees as well as by their fellow presidents.

I have asked the Council of the Arkansas Medical Society to form a similar organization which would give the leadership in Arkansas an opportunity to come together for discussion of problems within their organization whether it be county or special society. Past presidents of the Arkansas Medical Society will be members and encouraged to participate.

The Council will be invited to attend these sessions. Through communication between the presidents, a better understanding of our Medical Society, of the AMA, and of the problems within the membership will be understood by all.

The Organization of State Medical Society Presidents, is a very worthwhile organization at the national level. Hopefully this will be true at the state level.

I want to congratulate you for your decision to

add another member to the family of foundations to the Arkansas Medical Society. This foundation is created for the benefit of physicians who need a helping hand to regain their place as healers.

The non-profit Physicians Health Foundation has been approved by the Council and you have just approved it here in the House of Delegates. My heartiest congratulations to all that have worked on this most worthwhile project.

I do want to thank Dr. Reardon for being here and for speaking to us this morning. I want to thank executive vice president Ken LaMastus. Indeed it has been a pleasure to work with Ken and his very professional staff. They are top-notch people. They make the job of the president a pleasure.

Last, but not least, I want to thank each and everyone of you for allowing me to be your president!

I want you to know that this is a great organization. I am extremely proud to be a member. Please, take this message home with you, that this is a great organization and that you are proud to be a member of the Arkansas Medical Society.



Dr. Logan and Dr. Armstrong stand beside Dr. Kolb as he adjusts his AMS presidential medallion.



Dr. Armstrong presents Dr. Kolb with a framed cover from *The Journal of the Arkansas Medical Society*.



Dr. John Lytle presents Dr. Kolb with a plaque from the Arkansas Orthopaedic Society.

The Golf Tournament



Tournament first place winners (from left) Clark Mason, Dr. Crenshaw, Dr. Mann and Dr. Logan.



Dr. Edwin Coffey



(from left) Dr. and Mrs. Harris, and Dr. and Mrs. Williams



Dr. Frank Snipes



Team of annual session exhibitors from BFI Waste Systems

Arkansas Medical Society Alliance 71st Annual Session Report



1995-1996 AMS Alliance president Evelyn Thomas (left)
and 1994-1995 AMS Alliance president Mary Ann Stallings

The Seventy-First Annual Session of the Arkansas Medical Society Alliance met at the Arlington Hotel in Hot Springs, Arkansas, on May 4-6, 1995.

The President, Mary Ann Stallings, conducted the pre-convention board meeting at 2 p.m. on May 4, 1995, in the Magnolia Room. The general sessions of the House of Delegates were conducted on May 5 and 6.

Some highlights are as follows:

Mary Vollman, Chaplain, remembered the deceased members by reading their names as Mary Ann Stallings lit a candle in their honor; she concluded the service with a prayer.

There was a roll call of delegates conducted by Lyda Campbell, Secretary. The 26 delegates were seated and their numbers per area were determined by the number of dues paid members in their local Alliance.

The rules of the Convention were on page 2 of the session booklet.

The President gave her report on her year's activities. She named the positive aspects, the negative aspects and recommendations. Among the positives were the legislative success in "any willing provider" and the success of the Health Education Committee lead by Cathy Mackey. The negatives were around the declining membership and difficulty in recruitment and retention. She described some efforts in reaching the 800 spouses who are identified and have not had adequate contact. The recommendations were unfinished business from this year's activities: (1) another orientation for spouses at UAMS, (2) a Medical Marriage Education course for students and residents, and (3) an AMS Alliance dues increase.

President-Elect, Evelyn Thomas, served as Membership Chairman. She organized a local Alliance in Cleburne County where her husband currently practices. She described her efforts in member recruitment and retention; however, she reported that Alliance membership is down. The membership of AMS is in-

creasing; plans are being made to reach that population of spouses.

Planning and Development Chairman, Barbara Moody, researched the possibility of a part-time executive secretary for the Alliance. She prepared a job description, and the possibility of hiring someone already employed at the AMS offices has been discussed. There was a \$5 dues increase voted in for next year that may be used to hire a person if it can be afforded after present increased expenses.

Sandy Harrison, Finance Chairman, reported on the Committee's activities. She has reinvested scholarship monies, and her Committee's budget was accepted. A third scholarship will be awarded under the Ilse F. Oates umbrella as there were adequate funds.

Cathy Mackey, Health Education Chairman, reported they have given seminars on Domestic Violence to various groups - one being resident doctors.

The Committee used buttons ("Does Your Partner Hurt You?"), business cards with shelter phone numbers on them, and a Physicians Protocol Manual to be used by doctors and placed in their offices.

Cathy Mackey reported on numerous Health Education programs that were conducted all over the state by local Alliances last year.

The Health Education Foundation has conducted studies and made proposed plans to consolidate and streamline that operation in the future.

There were 17 past-presidents who attended the Past-President's Breakfast. They contributed monies to the Brooksher Loan Fund.

The President presented Dr. Dodd Wilson checks for over \$22,000 for AMA-ERF from the local Alliances.

The speakers were:

- I. Mrs. Susan Paddack, 1994-95 AMM Field Director
- II. Mrs. Jan Meyer, President-Elect 1994-95, Southern Medical Auxiliary
- III. Dr. Lenore Walker, Authority on Domestic Violence and Battered Women

Evelyn Thomas was installed as the President of the Arkansas Medical Society Alliance for 1995-1996.



Arkansas Medical Society Alliance past presidents

Alliance Presidential Address

Evelyn Thomas
President 1995-1996

Mary Ann, Arleta, Sandy, Rita, Nikki, Sara, Jean, Juanita, Ginny, Margaret Ann, Mary Jo, Mona, Carla, and other past presidents, I thank you for providing the Arkansas Medical Society Alliance members such a wonderful heritage. Your leadership becomes more evident each year as you continue to support this organization and share with us your wisdom and knowledge and guide us as we learn.

Susan Paddack and Jan Meyer thank you for your messages and for coming to Arkansas.

To Jerry Thomas, my partner of 41 years, who introduced me to the medical family 36 years ago and to my family here today, I thank you for your support, love, and endurance.

To my alliance, Cleburne County Medical Alliance, our hostesses today, I want to say thank you especially Jeannine Ashabranner and Jane Sharp. This is the first year for them as an organized medical charter of County, State or National.

The flowers today were provided by Cleburne County Memorial Hospital in Heber Springs.

I appreciate them supporting our Cleburne County Medical Society Alliance in this wonderful way. I also consider it a compliment to my husband, Jerry.

Aromatique of Heber Springs furnished the wonderful table favors which are for you at each table. I thank them for their generous support.

As a ship without charts and maps will sail in never ending circles, so does one of the most pressing issues of our time - the very vicious circle of domestic violence and abuse in this country has run amok, indeed has threatened to run aground, promising to decimate the most important value of our society, the family.

I don't have to tell you about family violence or quote you the obscene statistics; you already know about it from the media, from friends and neighbors, from your own experience.

I don't have to tell you about black eyes, broken broken bones, assault - you already know and know secondhand and, indeed, firsthand about fears and tears, about power and lack of power, about humiliation, physical and emotional scars, death.

And I don't have to tell you who it includes.



You already know that family violence, that physical and psychological bullying cuts across every socioeconomic sector imaginable. Black, White Christian, Mormon, you name the religion, the race, the creed, the political affiliation, the industry, the profession - doctors, yes-physicians, like the ones we know, the ones we are.

You know in your heart, your mind, from your own experience.

And you know who is responsible: I am, you are, you in the third row, those at the back and in the front.

We are responsible because we have not eradicated this societal plague, and we will remain responsible until we have stopped the violence against our children and their mothers. We must be active in this cause, we must lead this cause, we must intervene however we can; in the halls of Congress, in the boardrooms of media and policy gurus, in the corporate workplace, in the classrooms, in the churches, the mosques, and the synagogues, in the courtrooms.

We must do what we can to help end this vicious cycle. Helping the battered, ridding our society of the abusers. Domestic violence is not a family matter, it is not a private matter, it is quite simply a criminal matter. We cannot tolerate savagery from relatives any more than we would from strangers. How can we possibly erase crime from our street when it is nurtured in the home? How can we have family values when we do not value the individuals of those families? How can we or the medical community let this cancer fester and spread when we are pledged to help the healers heal? Today is the day to begin zero tolerance. This is the time to chart the new course that will lead us from fear and anguish.

This is not someone else's problem. It is mine. It is yours. It is collective. It is merely the black eye on our society, but it is the scar upon the soul of mankind.

I look forward to working with each of you next year. We have a wonderful board, committee chairmen, and county officers. I plan to visit all that will invite me.

THANK YOU!!



*Evelyn Thomas, Arleta Power
and Nikki Lawson*

*Jean Hundley and
Evelyn Thomas*



*Susan Paddack, 1994-1995
AMAA Field Director, was
a guest speaker.*

Report of the Young Physicians Committee



Jo Ann Steigerwald of the Southern Medical Association speaks about Evaluation & Management Coding & Documentation

The Young Physicians Committee met in conjunction with the Young Physicians symposium on Coding and Reimbursement held in Hot Springs at the Arlington Hotel on Thursday, May 4, during the annual session. The symposium was quite well received and had 33 attendees. The committee felt the symposium was a success, and the main discussion was concerning possibilities for next year's symposium. We plan to pursue the topic of marketing your practice in the changing health care environment. The committee does feel like the conference, held in conjunction with the annual session, is a good way to attract young physicians to attend the meeting and stimulate interest. The committee plans to meet again later this year to finalize plans.

Report of The Arkansas Pathology Society

The Arkansas Pathology Society had an annual meeting on May 6, 1995. Ms. Kathleen Kilkenny, M.B.A., guest speaker, addressed the society's membership on the topic of "Managed Care and the Pathologist." A business meeting followed and issues relating to Pathology were discussed. C.A.P. and A.S.C.P. reports were given. The society elected for 1995-1997 the following officers:

President, Anthony Hui, M.D.

President-Elect, Ian Birkett, M.D.

Secretary-Treasurer, Rex Bell, M.D.

Immediate Past-President, Gerald Stolz, Jr., M.D.

The Arkansas Urologic Society

The Arkansas Urologic Society met Saturday, May 6 in the Jupiter Room. The featured speaker was Jorge L. Lockhart, M.D., Professor and Chairman, Department of Urology, University of South Florida in Tampa. Dr. Lockhart is an internationally recognized author on reconstruction and female incontinence. He spoke about the evaluation and management of female incontinence.



Jorge L. Lockhart, M.D.

In Memoriam

The following members of the Arkansas Medical Society and Arkansas Medical Society Alliance who died during the past year were remembered during the 1995 AMS Annual Session.

Society Members:

Walter M. Bond, Waverly, Ohio
Robert G. Carnahan, Little Rock
Samuel L. Cornwell, Clarendon, Texas
Marion S. Craig, Little Rock
Charles E. Crawley, Cordova, Tennessee
John L. Dedman, Jr., Camden
David E. Ducker, Salem
Tom L. Dunn, Hampton
Samuel Z. Faier, Fort Smith
William B. Harrell, Texarkana
Robert L. Henry, Little Rock
John T. Herron, Little Rock
Robert A. Hoagland, Dumas
Harlan C. Holmes, Little Rock
John M. Hundley, Hot Springs
Morris A. Jackson, Little Rock
Milton C. John, Stuttgart
W. Duane Jones, Fort Smith
Karlton H. Kemp, Texarkana
Leeman H. King, Hot Springs
Mason G. Lawson, Little Rock
Max F. McAllister, Harlingen, Texas
Max J. Mobley, Russellville
Mahlon D. Ogden, Little Rock
Walter H. O'Neal, Little Rock
Nathan L. Poff, Heber Springs
Harold D. Purdy, Little Rock
Oliver C. Raney, Harrison
Ishmael S. Reid, Memphis, Tennessee
Nicholas W. Riegler, Little Rock

Joseph Robinette, Pine Bluff
Wayne L. Rockwell, Leavenworth, Kansas
Frances C. Rothert, Hot Springs
Mildred Schneider, Little Rock
James T. Smith, Paris
Nathan E. Strickland, Batesville
Orion H. Stuteville, Marco Island, Florida
Bryant S. Swindoll, North Little Rock
Frank G. Thibault, Sr., Benton
William D. Thornton, Texarkana, TX
C. Robert Watson, Little Rock

Alliance Members and Spouses:

Mrs. David Brown (Deborah), Mena
Mrs. Thomas J. Cunningham (Margaret), Pine Bluff
Mrs. Kenneth R. Duzan (Marie), El Dorado
Mrs. Rogers P. Edmondson (Mary Lee), Greenbrier
Mrs. Harold B. Hawley (Roselyn), Little Rock
Mrs. Charles Kennedy (Margaret), North Little Rock
Mrs. Luther M. Lile (Julia), Little Rock
Mrs. Malcolm O. Peeler (Roberta), Jonesboro
Mrs. Grover D. Poole (Imogene), Jonesboro
Mrs. Harold D. Purdy (Rita), Little Rock
Mrs. Ben N. Saltzman (Ruth), Mountain Home
Mrs. George B. Talbot (Helen), Pine Bluff
Mrs. J. Kenneth Thompson (Meredith), Fort Smith
Mrs. H. King Wade (Janet), Hot Springs
Mrs. E. Lloyd Wilbur (Elizabeth), Little Rock



1995 ANNUAL SESSION SPONSORS



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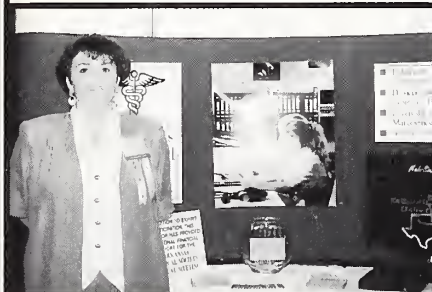
CMS Therapies



Columbia Health System of Arkansas



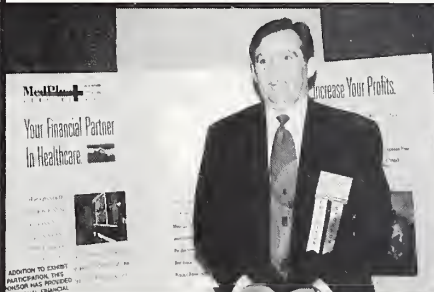
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Schering Corporation



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Southern Medical Association



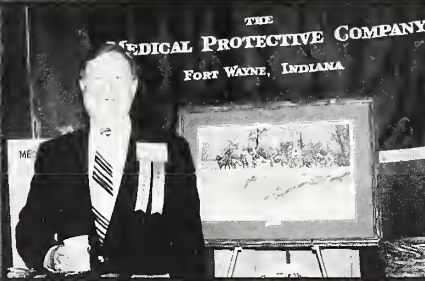
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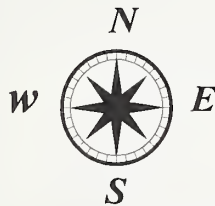
The Doctors' Company



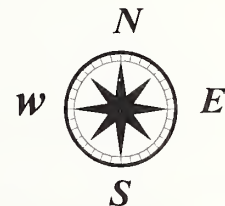
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Thank You

1995 Arkansas Medical Society Annual Session Sponsors

The AMS Annual Session would not be possible without the support of our sponsors. The Society thanks the following for their support of the 119th Annual Session:

- Arkansas Blue Cross Blue Shield (BCBS Reception)*
- Arkansas Regional Organ Recovery Agency (Afternoon Break)*
- Boatmen's National Bank of Arkansas (Welcome Reception)*
- CMS Therapies (Hospitality Hour)*
- Columbia Health System of Arkansas (President's Reception & Dance)*
- First Commercial Bank (Continental Breakfast)*
- Freemyer Collection System (Educational Grant)*
- Glaxo Inc. (Educational Grant)*
- MedPlus Leasing Company (Educational Grant)*
- National Park Medical Center (Early Morning Refreshments)*
- Rhone-Poulenc Rorer Pharmaceuticals, Inc. (Educational Grant)*
- Schering Corporation (Golf Tournament Refreshments)*
- Snell Prosthetic & Orthotic Laboratory (Program Ad)*
- Southern Medical Association (Casino Party)*
- Southwest Airlines (Casino Party Grand Prize)*
- State Volunteer Mutual Insurance Company (T-shirts)*
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- The Medical Protective Company (Session Portfolios)*
- The St. Paul Companies (Young Physicians Workshop)*

Photographs depict either the company representatives, the sponsored event or the donated prize.

1995 ANNUAL SESSION EXHIBITORS

Thank you for being a part of our 1995 convention!

- | | |
|---|---|
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| AMS Benefits, Inc. | Key Pharmaceuticals |
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| Arkansas Blue Cross Blue Shield | Lincare |
| Arkansas Caduceus Club | Medaphis Physician Services Corporation |
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| Baptist Medical Center | National Park Medical Center |
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1995 Grand Prize Winners



Mike Riddell, M.D., of Russellville, was the grand prize winner of a \$1,000 Worldwide Travel gift certificate for a trip to the destination of his choice.

Barbara Szymoniak, of Salcris Systems, won the exhibitor grand prize of \$200.



Fifty Year Club



The Fifty Year Club is composed of physicians who, for the past fifty years, have loyally and effectively served the community and, by skill and devotion to high ideals, upheld and maintained the standards of the medical profession.

Dr. Ben N. Saltzman presided over the Fifty Year Club luncheon. An historical slide presentation was given by Dr. C. R. Ellis. Physicians attending the luncheon were Drs. John Ashley, Clark M. Baker, Max Baldridge, Charles Cyphers, C. R. Ellis, James Guthrie, James Guenthner, Fred Henker, N. B. Kersh, Albert S. Koenig, Agnes Kolb, Payton Kolb, C. C. Long, Joseph Norton, Frank Padberg, Joseph Rosenzweig, Ben Saltzman, Herd Stone, and H. W. Thomas.



1995 Arkansas Medical Society Shuffield Award

Presented Friday, May 5, 1995

To

Mrs. Bernice Jones



Dr. Charles Rogers presents the award to Mrs. Jones

The Shuffield Award is given each year to recognize a non-physician who has made significant contributions to their community in the area of health care. The award is named in honor of the late Drs. Joe and Elvin Shuffield, a father and son team from Little Rock, who devoted their lives to the quality of health care in our state.

For the past eleven years, Mrs. Jones has contributed to the medical and educational community with endowments to major medical institutions, facilities, colleges and universities throughout Arkansas.

Mrs. Jones is a member of the Northwest Medical Center's board of directors and honorary chairperson of the Harvey & Bernice Jones Eye Institute advisory board.

She has been a recipient of the Outstanding Civic Service Award from the Springdale Chamber of Commerce and the Distinguished Service Award from UAMS College of Medicine.



ANNUAL SESSION PICS



**Dr. and Mrs.
Armstrong at the
President's Reception
and Dance.**



**(From left to right) Ken LaMastus, Margaret Kolb
and Ken's wife, Qui.**

**(From left to right) Dr. Crow,
Dr. Armstrong and Dr.
Burge (they all graduated
together in the same class
in medical school.)**



**Dr. and Mrs. Kolb
with Dr. and Mrs.
Armstrong.**



(From left to right) Dr. Rogers with Senator Bill Gwatney and Lynn Zeno during the Shuffield Luncheon and award presentation.



The Exhibit Center during a session break.



Miss Hot Springs sang the National Anthem and The Hot Springs Navy Junior ROTC presented the colors during the First House of Delegates.



Dr. and Mrs. Langston during the President's reception and dance.



A crowd in line for the dinner buffet during "Casino on the High Seas."



The Hot Springs Jaycees had nearly everyone rolling the dice during "Casino on the High Seas."



After placing their bets, Dr. Armstrong and others keep their eyes on the dice during "Casino on the High Seas."



Other players take their chances on the revolving wheel of roulette during "Casino on the High Seas."



David Wroten and Margaret Ritchie, of AMS Management Co., carefully place their bets on a poker game during "Casino on the High Seas."



Dr. Jerry Meyer and Jan Meyer, 1994-1995 president-elect of SMAA, and Mary Ann Stallings during the Inaugural Banquet.



Center Stage Music entertains during the President's Reception and Dance.



Dr. Lawson and his daughter take a turn on the dance floor during the President's Reception and Dance.



Cardiology Commentary and Update

Joe Bissett, M.D.**

J. David Talley, M.D.*

RECENT ADVANCEMENTS IN THE MANAGEMENT OF SUDDEN CARDIAC DEATH: IMPLANTABLE ANTIARRHYTHMIC DEVICES

INTRODUCTION

Left ventricular damage from myocardial infarction may result in fatal sustained ventricular arrhythmias from altered electrical properties of damaged myocardium. Chronic electrical instability is the most common cause of sudden cardiac death and may result in as many as 400,000 sudden deaths per year. Therapy with antiarrhythmic drugs is frequently ineffective, and coronary artery bypass graft surgery may not be beneficial. We present a patient who sustained an episode of sudden cardiac death treated with an implantable antiarrhythmic device. Recent advancements in this rapidly developing technology are presented.

PATIENT PRESENTATION

A 60-year-old man with a history of myocardial infarction and coronary bypass surgery developed recurrent ventricular arrhythmias. The electrocardiogram showed sinus rhythm with a first degree and right bundle branch blocks and left axis deviation. An echocardiogram showed an ejection fraction of 15%.

The patient was placed on amiodarone 200 mg qd and digoxin 0.125 mg qd. In spite of medical therapy, ventricular fibrillation developed. The arrhythmia was detected by a rate sensing electrode within the right ventricle. The rapid rate triggered a fibrillation detection algorithm resulting in the delivery of a 34-joule shock to the myocardium. The shock resulted in successful defibrillation. The patient resumed his normal activities.

DISCUSSION

The first antiarrhythmic device implanted in a human occurred on February 4, 1980 at the Johns Hopkins Hospital.¹ This effort culminated more than 10 years of investigative effort by Dr. Mieczyslaw Mirowski. The death of his Chief of Medicine from recurrent ventricular arrhythmias inspired Dr. Mirowski to study the problem of sudden death. This device triggered a new discipline in clinical medicine, incorporating the elements of electrical engineering, electrocardiography, and electrophysiology. This brief review will trace the major developments in this field.

DEFIBRILLATING THE HUMAN HEART

The intra cardiac threshold or energy requirement for defibrillation was determined during coronary artery bypass graft surgery using a catheter electrode placed in the right ventricle. The minimum energy for conversion of ventricular fibrillation to sinus rhythm was found to be less than 20 joules in most patients. This low energy defibrillation shock was well within the range of a battery-capacitor system and far less than the 200-360 joules recommended for external or transthoracic defibrillation. Subsequent studies demonstrated that successful defibrillation requires the application of sufficient energy to form an electrical gradient throughout the cardiac muscle mass. In this respect, defibrillation is far more difficult than cardiac pacing, which requires only that a relatively small area of tissue be stimulated to reach threshold potential.

The generation of a 34-joule shock requires considerable battery drain as well as several seconds to charge the capacitors before energy can be delivered. The primary indication for placement of an implantable antiarrhythmic device is recurrent life-threatening

* Dr. Talley is with the University of Arkansas for Medical Sciences, Division of Cardiology, Department of Internal Medicine.

** Dr. Bissett is Professor of Internal Medicine at the University of Arkansas for Medical Sciences, Division of Cardiology.

ventricular tachycardia or ventricular fibrillation that cannot be successfully treated by other means or reversed by correction of coronary ischemia, electrolyte abnormalities, or drug toxicity. The ventricular arrhythmia cannot be incessant because of rapid battery depletion associated with multiple device discharges.

EVOLUTION OF THE IMPLANTABLE ANTIARRHYTHMIC DEVICE:

The First to Fourth Generation

The initial implantable antiarrhythmic device (a shock box) was capable of delivering only a monophasic (a truncated exponential waveform) shock upon recognition of a critical heart rate determined by a pair of epicardial sensing electrodes. The shock was transmitted to the heart through epicardial electrodes. The device had no pacing capability for termination of ventricular tachycardia or prevention of symptomatic bradycardia.

From this beginning, there have been dramatic advances in arrhythmia detection and recording, shock delivery and pacing therapy. These improvements are listed in Table 1

(shown on the next page). Third generation devices incorporate antitachycardia pacing features and bradycardia pacing.²³ Detection and therapy could be delivered through a transvenous electrode which permitted implantation without the necessity for thoracotomy. These devices added a new energy waveform for defibrillation, the biphasic shock. In contrast to the basic monophasic defibrillation waveform, the biphasic shock reversed polarity during energy delivery. The biphasic shock was shown to lower energy requirements for defibrillation for both epicardial and endocardial lead systems. Although the mechanism has not been clearly established, animal studies have shown that the electrical gradient needed for defibrillation is lowered.

The fourth generation implantable antiarrhythmic device contains improved detection algorithms for separation of supraventricular tachycardia from ventricular arrhythmias. Sudden onset and rate stability crite-

ria can be activated for distinction from sinus tachycardia and atrial fibrillation. The size of the device is reduced from 119 cc to 83 cc to allow implantation in the pectoral region (Figure 1).⁴ The smaller fourth generation device had a lower incidence of complications (8.1 %) when compared with the larger abdominal from the same manufacturer (12.4%, $P < 0.05$) complications related to the implant pocket were reduced to 1.9%.⁵

CLINICAL APPLICATION OF THE FOURTH GENERATION DEVICES

The range of therapeutic interventions available in recent devices allows the physician to adapt therapy to the characteristics of the ventricular tachyarrhythmia. Patients with sustained ventricular tachycardias can be treated with programmed ventricular pacing cardioversion therapies to maximum device output. Multiple attempts at termination with burst (fixed rate) or decremental (decreasing pacing intervals) methods are usually reserved for the patient who does not develop hypotension or syncope during the initial phases of ven-

tricular tachycardia. Patients with more rapid episodes of ventricular tachycardia (greater than 200 beats per minute) may be less responsive to pacing and acceleration of the ventricular rate may occur. Since the results of ventricular pacing cannot be predicted with absolute certainty for each episode, an extended high rate duration may be programmed in some units. If pacing is unsuccessful, the device will deliver fibrillation therapy after a preset interval.

The patient who develops rapid progression to ventricular fibrillation can be promptly diagnosed and defibrillated. In the current fourth generation devices (Figure 1), ventricular fibrillation may be diagnosed when 12 of the last 16 cardiac intervals are faster than the selected rate. The capacitors are then charged to deliver a defibrillating shock. In most instances the arrhythmia is terminated with a single shock, however a total of four defibrillation shocks can be delivered. If a period of sinus bradycardia occurs, the de-

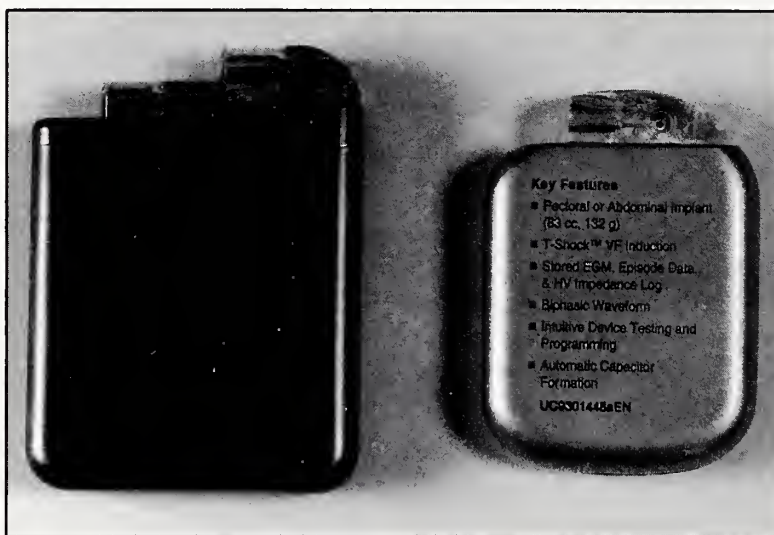


Figure 1. The smaller, fourth generation device (right) is shown in comparison with a typical second generation implantable antiarrhythmic device (left). This device may be implanted in the pectoral region.

Table 1: Features of Implantable Antiarrhythmic Devices

	1	2	3	4
Defibrillation	Fixed Energy Only	Programmable Energy Levels	Programmable Energy Levels	Programmable Energy Levels
Antitachycardia Pacing	No	No	Yes	Yes-Multiple Tachycardia Zones
Low Energy Cardioversion	No	No	Yes	Yes
Stored Electrograms	No	No	Yes	Yes (Stored Memory for Anti-arrhythmic events/therapy)
Electrodes	Epicardial	Epicardial or Endocardial	Epicardial or Endocardial	Epicardial or Endocardial
Implant Site	Abdominal	Abdominal	Abdominal	Pectoral or Abdominal
Waveform	Monophasic	Monophasic	Biphasic	Biphasic
Bradycardia Pacing	No	No	Yes	Yes
Non-invasive Electrophysiologic Study capacity	No	No	Yes	Yes

vice can respond with bradycardia pacing. Many patients do not experience loss of consciousness because of rapid detection and therapy. The intra cardiac electrogram is stored for review and a list of pre and post-detection intervals are given depending on the detection frequency.

CAVEATS OF IMPLANTABLE ANTIARRHYTHMIC DEVICE THERAPY

Potential problems with implantable antiarrhythmic device therapy include over sensing and utilization due to supraventricular tachycardias, pacemaker impulses and other types of intrinsic and extrinsic electromagnetic interference as well as under sensing from electrode failure or inappropriate detection criteria. In addition, antiarrhythmic drugs such as IC agents (encainide, flecainide) and an agent with multiple actions (amiodarone) may raise the threshold for defibrillation. Careful analysis of clinical data and correlation with stored electrograms may help to clarify the mechanism of Implantable antiarrhythmic device discharge.

Although endocardial defibrillation thresholds are generally thought to be stable, repeat measurements may be required when drugs or other interventions are given such as amiodarone.

CONCLUSION

Remarkable progress in implantable antiarrhythmic device therapy has occurred since the original human implantation in 1980. The current fourth generation device can be implanted in the pectoral position. This

smaller unit combines programmable defibrillation with biphasic shocks, antitachycardia pacing, low energy cardioversion, bradycardia pacing, stored intervals and electrograms current other diagnostic and therapeutic options. Although the Implantable antiarrhythmic device has reduced the incidence of sudden death in patients with recurrent life threatening ventricular arrhythmias, significant improvements can be expected in the future. Developments in this area of clinical electrophysiology may allow the primary care physician and cardiovascular specialist to improve the care and quality of life for patients with severe ventricular arrhythmias.

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Arkansas HIV/AIDS Report 1983-1995

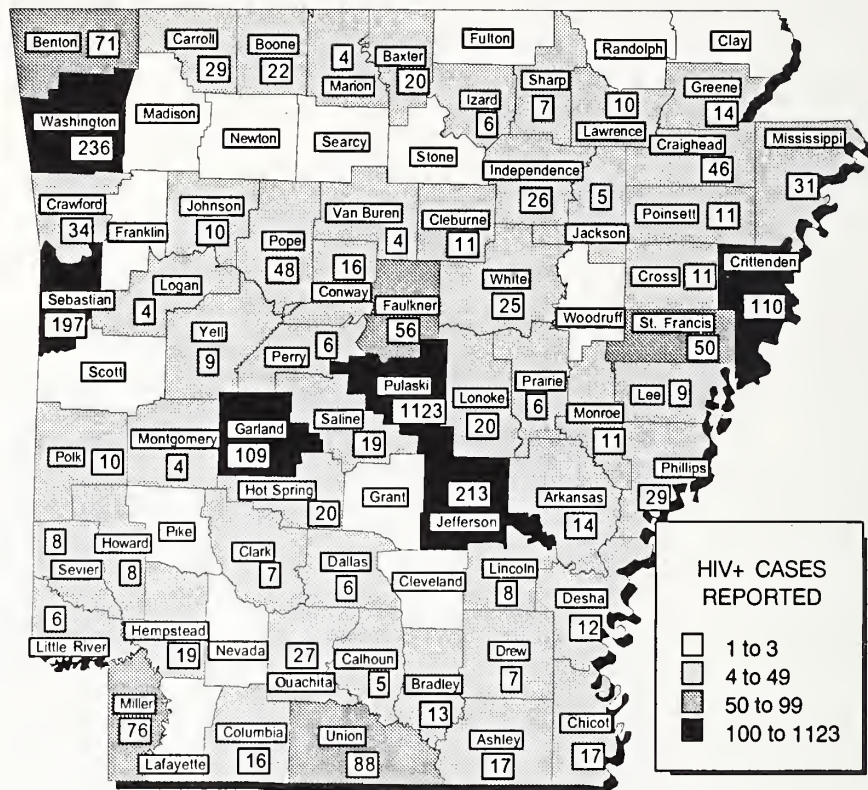
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



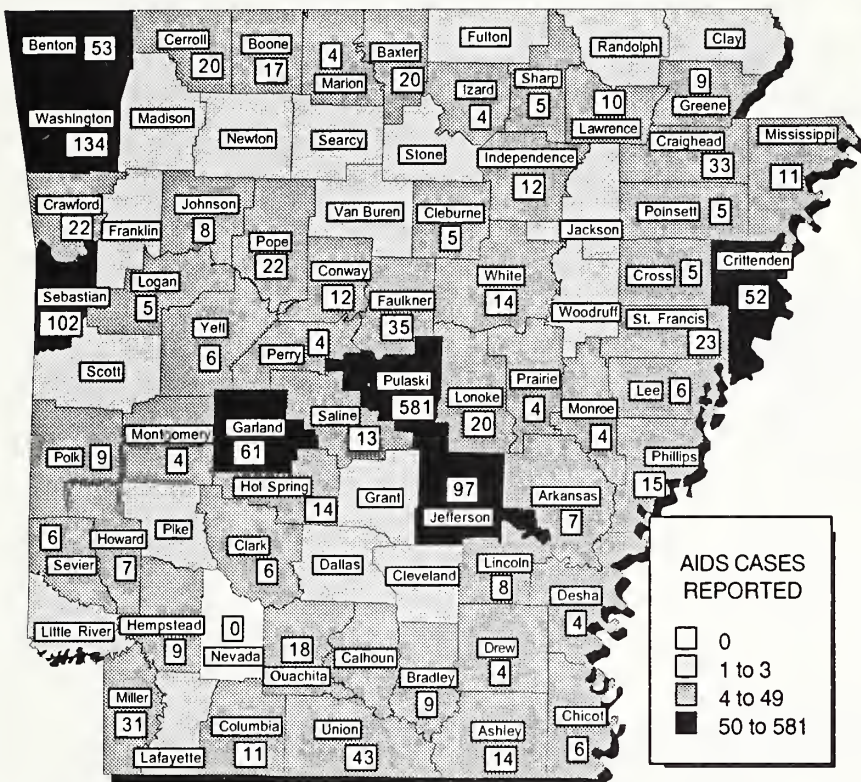
County of residence at the time of test for the 3,121 Arkansans reported to be HIV+. (4/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	106	2,593	83
	Female	8	26	37	68	85	81	94	90	39	528	17
AGE	<5	1	1	2	8	13	6	3	7	1	42	1
	5-12	0	1	1	5	1	2	1	0	0	11	0
	13-19	0	7	8	14	19	25	11	22	3	109	4
	20-29	33	110	123	183	149	156	175	145	48	1,122	36
	30-39	44	86	104	196	208	179	168	171	57	1,213	39
	40-49	22	25	35	56	70	67	65	77	24	441	14
	>49	8	6	11	17	22	38	23	35	12	172	6
RACE	White	87	170	174	328	298	291	277	258	96	1,979	63
	Black	21	69	106	151	184	173	163	183	45	1,095	35
	Other/Unknown	0	2	5	2	3	9	6	16	4	47	2
RISK	Male/Male Sex	64	137	139	243	244	260	240	226	33	1,586	51
	Injection Drug User (IDU)	13	30	48	73	96	75	64	71	16	486	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	5	216	7
	Heterosexual	5	25	26	60	65	68	101	87	13	450	14
	Transfusion	5	5	4	6	8	10	0	1	0	39	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	2	42	1
	Undetermined	1	20	36	41	24	12	9	39	76	258	8
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	145	3,121	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995



AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.

Of the 3,121 Arkansans reported to be HIV+, 1,710 have been diagnosed with AIDS. (4/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	72	1,489	87
	Female	5	6	10	20	25	35	64	42	13	220	13
AGE	<5	0	1	1	6	6	3	2	1	1	21	1
	5-12	0	1	0	1	1	0	1	0	0	4	0
	13-19	0	0	0	4	3	2	4	3	0	16	1
	20-29	31	27	24	55	57	81	110	67	18	470	27
	30-39	39	36	41	78	80	128	178	133	37	750	44
	40-49	15	10	7	35	41	52	78	61	18	317	19
	>49	5	8	7	11	13	19	27	30	11	131	8
RACE	White	74	61	58	141	134	206	275	190	55	1,194	70
	Black	16	20	21	47	66	75	121	102	28	496	29
	Other/Unknown	0	2	1	2	1	4	4	3	2	19	1
RISK	Male/Male Sex	55	59	50	122	120	182	237	162	48	1,035	62
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	14	245	14
	Male/Male Sex & IDU	16	6	6	18	17	21	26	23	3	135	8
	Heterosexual	5	3	7	11	12	24	52	40	5	157	9
	Transfusion	2	7	3	7	11	3	2	4	0	39	2
	Perinatal	0	1	1	6	6	3	3	1	1	22	1
	Hemophilic	0	1	1	5	5	4	5	6	2	29	2
	Undetermined	0	2	1	3	1	3	5	13	10	47	2
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	85	1,709	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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State Health Watch

Information provided by the Arkansas Department of Health, Division of Epidemiology

State Health Watch is a new feature making its debut in this issue of The Journal. The information and statistical graphs are provided by the Arkansas Department of Health. Readers are encouraged to comment and offer suggestions on this and any other information in The Journal. All correspondence should be mailed to the journal editor at the Arkansas Medical Society, P.O. Box 5776, Little Rock, AR 72215.

DISEASE REPORTING - THE DATABASE OF PUBLIC HEALTH

The Division of Epidemiology of the Arkansas Department of Health maintains the only system for disease reporting within the state. Physicians and other medical personnel are required, by law (Act 96 of 1913 (Arkansas Statutes, 1947, Section 82-110) Section III), to report certain disease occurrences to the Arkansas Department of Health. Information regarding cases of reportable diseases is used to monitor the morbidity and in detecting and controlling disease outbreaks of public health significance. Reportable disease information is also used by the Centers for Disease Control in monitoring disease trends nationwide. Without the cooperation of the medical community, the Department of Health would be severely hampered in its task of disease prevention and control.

Reportable diseases are to be reported to the Arkansas Department of Health within 24 hours on the Toll-Free Code-A-Phone Reporting System (1-800-482-8888), or reports may be made to your local health unit. The Toll Free Code-A-Phone number is operational 24 hours a day. Disease reports should include the following data:

1. Name, location (town) and phone number of reporting person.
2. Disease or suspected disease and date of onset.
3. Name, age, sex, address and phone number of patient (please spell patient's name).
4. Physician's name, location and phone number.
5. Any labwork or clinical symptoms leading to the diagnosis.

Individuals desiring to further discuss reportable diseases may phone the Division of Epidemiology, Bureau of Health Resources, at 661-2597 or 1-800-482-5400 ext 2597, M-F 8:00 to 4:30.

Physicians may designate nurses, laboratory technicians or records personnel to report diseases to the Department of Health. Our goal is to make disease reporting as easy and simple as possible and eliminate written reports whenever possible. It is our intent to aggregate, evaluate and disseminate communicable disease data to physicians throughout the state and to conduct epidemiological investigations when indicated. The reportable diseases are listed below. Your cooperation in reporting is sincerely appreciated.

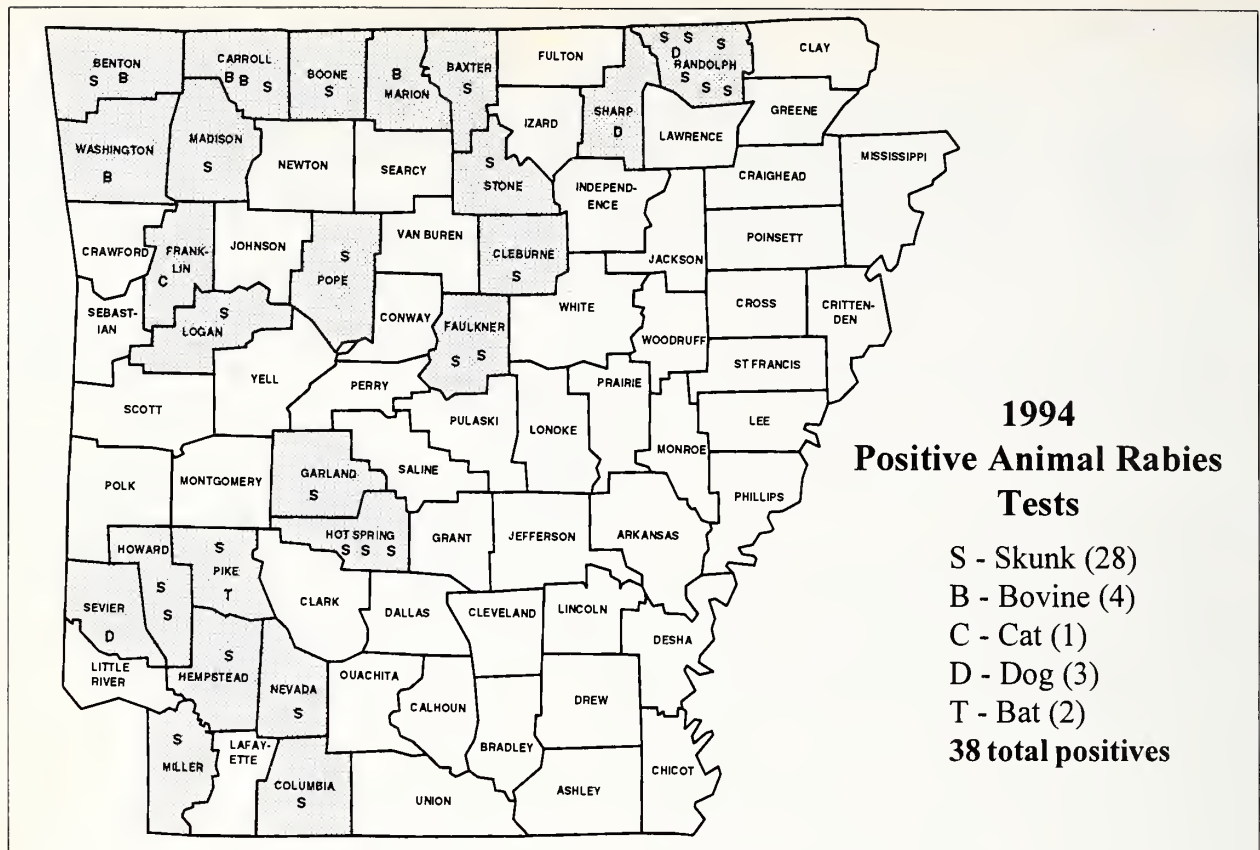
Diseases in ALL CAPITALS are to be brought to the immediate attention of the State Epidemiologist as soon as

they are suspected. These diseases are of extreme PUBLIC HEALTH SIGNIFICANCE and immediate assistance will be available. For the diseases listed below and marked by an asterisk (*), the reporting physician will be contacted for additional information.

REPORTABLE DISEASES

AIDS*
Amebiasis
ANTHRAX
Aseptic Meningitis*
Blastomycosis
BOTULISM
Brucellosis*
Campylobacter Enteritis
Cat Scratch Disease
Chancroid
CHOLERA
Coccidioidomycosis
Congenital Rubella Syndrome*
DIPHTHERIA
Ehrlichiosis
Encephalitis, all types
E. coli 0157-H7
FOOD POISONING, all types
Giardiasis
Gonococcal Ophthalmia
Gonorrhea
Granuloma Inguinale
Gullain-Barre Syndrome*
Hemolytic-Uremic Syndrome
Hepatitis (report Type A, B, Non-A Non-B, or unspecified and give results of all hepatitis serology or "not done")*
Histoplasmosis
H.I.V.
Influenza**
Kawasaki Disease*
Legionellosis*
Leprosy*
Leptospirosis*
Lyme Disease*
Lymphogranuloma Venereum
Malaria*

continued on next page...



REPORTABLE DISEASES

continued from previous page

Meningitis, Haemophilus influenzae Type B*
Meningococcal Infections*
Mumps
Pesticide Poisoning
PLAGUE
POLIOMYELITIS*
Psittacosis (Ornithosis)*
Q FEVER
RABIES, animal
RABIES, human
Rash illness (including MEASLES* & RUBELLA*)
Relapsing Fever*
Reye Syndrome*
Rheumatic Fever
Rocky Mountain Spotted Fever*
Salmonellosis (including Typhoid*)
Shigellosis
SMALLPOX
Syphilis
Tetanus*
Toxic Shock Syndrome*
Toxoplasmosis
Trichinosis*
Tuberculosis
Tularemia*
WHOOPING COUGH (Pertussis)*
TYPHUS FEVER
YELLOW FEVER

** Individual cases to be reported only when laboratory testing has determined the viral type.

REPORTABLE OCCUPATIONAL DISEASES

to include the pneumoconioses

Asbestosis*
Byssinosis*
Coal Workers Pneumoconiosis*
Mesothelioma*
Silicosis*

The following diseases are also of public health importance and should be reported whenever there is an unusual incidence or outbreak (including seasonal outbreaks). The telephone report need only consist of: (1) the physician's name and location; (2) the suspected disease; (3) the number of cases and interval during which the cases were seen.

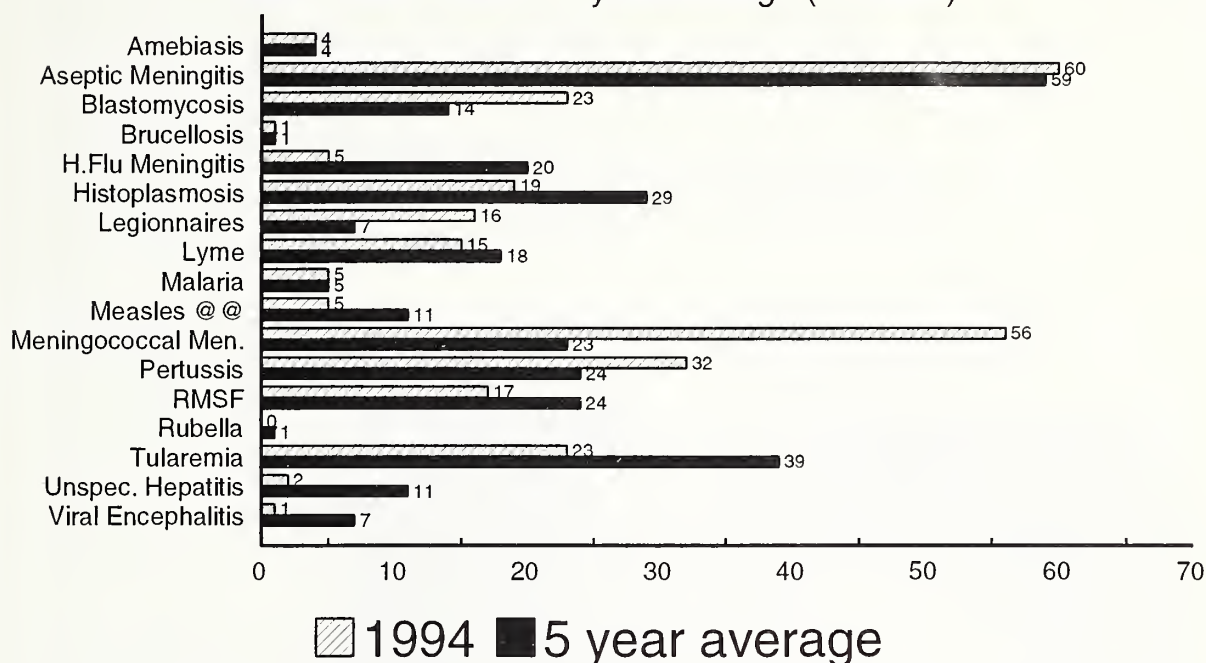
DISEASES FOR WHICH ONLY OUTBREAKS NEED TO BE REPORTED

Acute Upper Respiratory Disease
Chickenpox
Conjunctivitis
Dermatophytosis (Ringworm)
Enteropathogenic E. coli Diarrhea
Epidemic Diarrhea of Unknown Etiology
Gastroenteritis
Herpangina
Hospital Acquired Infections
Infectious Mononucleosis
Influenza (outbreaks to be reported by estimated numbers)
Pediculosis
Pleurodynia
Pneumonia (bacterial, mycoplasma, viral)
Staphylococcal Infections
Streptococcal Infections

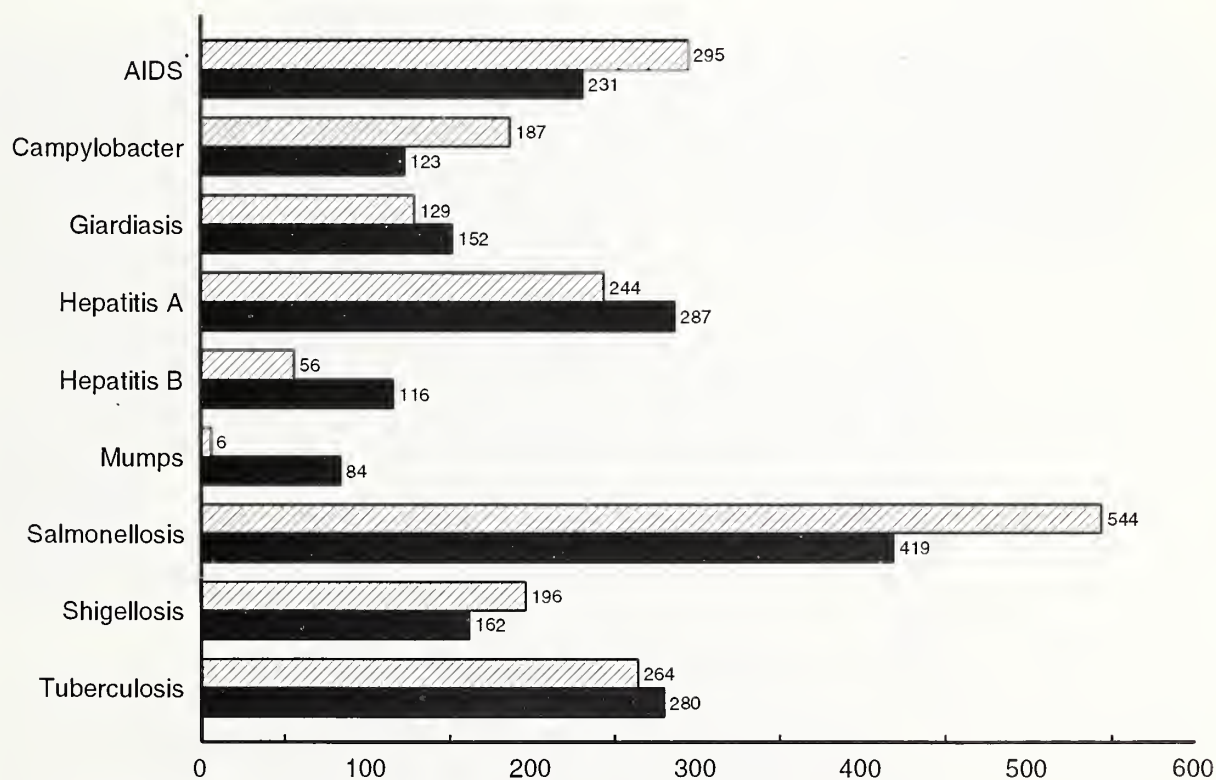
Copies of the instructions for reporting communicable diseases to the Arkansas Department of Health may be obtained by contacting 661-2395 or 1-800-482-5400 ext 2395, M-F 8:00 to 4:30.

Selected Reportable Diseases in Arkansas

New Cases 1994 vs 5 year average (1989-93)



@@ Measles history given as 5 year median



* New AIDS case definition as of 1993

New Members

CROSSETT

Spohn, Peter John, Orthopaedic Surgery. Medical Education, Oregon Health Sciences Center, Portland, 1977. Internship, University of Mississippi Medical Center, 1978. Residency, University of Colorado Health Science Center, 1985. Board certified.

FORT SMITH

Ismail, Hassan M., Internal Medicine. Medical Education, Damascus University Medical School, El Paso, Texas, 1988. Internship/Residency, Texas Tech University, 1992/1995.

HARRISON

Shapter, Janet B., Emergency Medicine. Medical Education, Wright State University, Dayton, Ohio, 1985. Residency, Wright State University, 1988. Board certified.

JONESBORO

Chediak, Gregory, Internal Medicine. Medical Education, University of Oklahoma School of Medicine, Oklahoma City, 1989. Internship, University of Oklahoma, 1989. Residency, Dept. of Internal Medicine, University of Oklahoma and Dept. of Neurology, University of California at Davis, 1991. Board certified.

PLAINVIEW

Westwood, John J., General. Medical Education, UAMS, 1982. Internship, UAMS, 1982.

RUSSELLVILLE

Frais, Michael A., Cardiology. Medical Education, Liverpool University Medical School, Liverpool, England, 1974. Internship, Liverpool Area Health Authority, 1979. Residency, Calgary, Alberta, Canada, 1983.

SPRINGDALE

Sites, Terry J., Orthopaedic Surgery. Medical Education, University of Missouri Medical School, Columbia, 1984. Internship/Fellowship, University of California, San Diego Medical Center, 1985/1986. Residency, University of California at Davis, 1990. Board certified.

TEXARKANA

DeHaan, Jeffrey T., Orthopedic. Medical Education, University of Iowa College of Medicine, Iowa City, 1981. Internship/Residency, University of Texas Health Science Center, San Antonio, 1982/1986. Board certified.

RESIDENTS

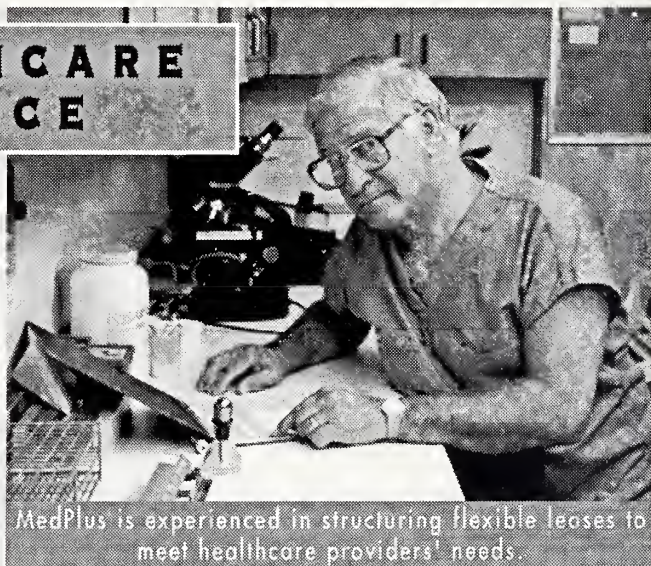
Fink, Roger Lee, II, Pathology. Medical Education, University of Missouri, Columbia, 1991. Residency, UAMS, 1996.

Tharrington, Christopher Leslie, Diagnostic Radiology. Medical Education, Duke University School of Medicine, 1992. Residency, Baptist Memorial Hospital, Memphis, Tennessee, 1996.

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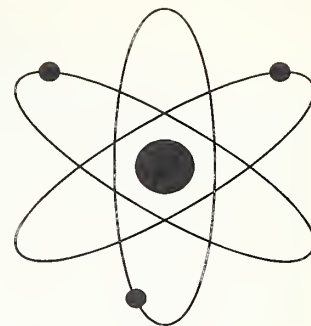
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Radiological Case of the Month



Steven R. Nokes, M.D.
W. Bradley Pierce, M.D.

History:

This forty-year-old woman with implants presented with a palpable mass in the right breast. Bilateral mammograms (Figure 1) and a right breast MRI (Figure 2) were obtained.

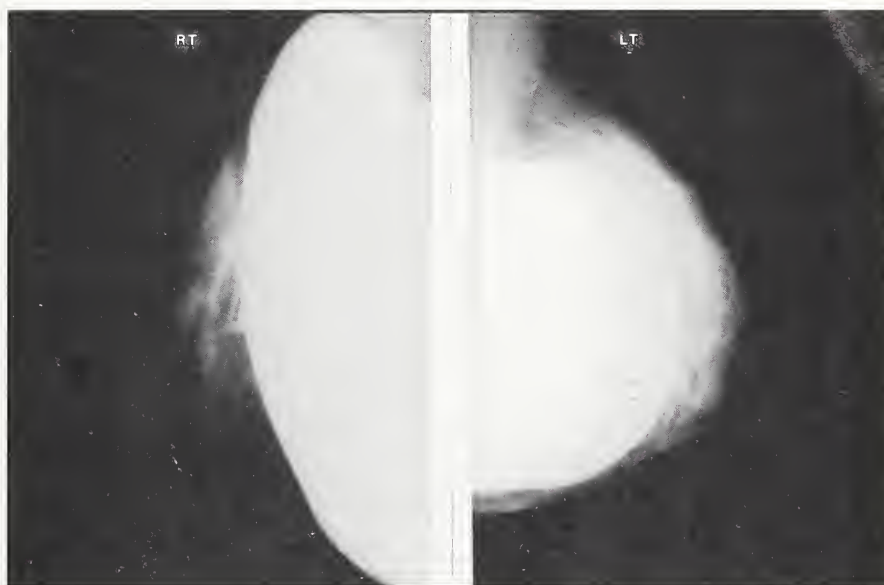


Figure 1. Bilateral MLO mammograms

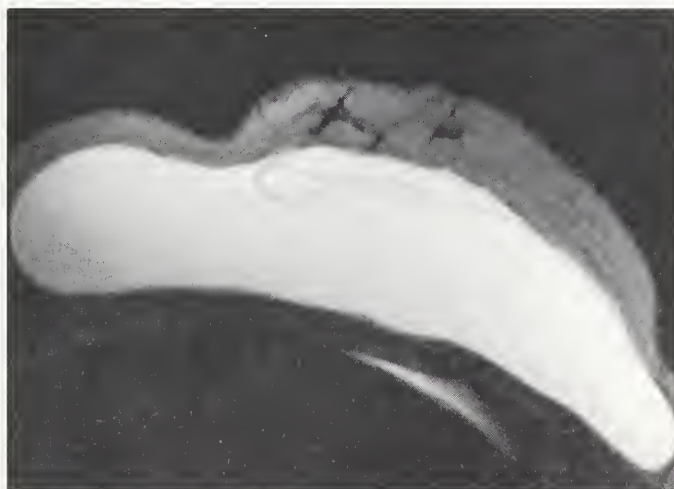


Figure 2. Sagittal MR of the right breast (FSE 5000/160)

Intracapsular Implant Rupture

Radiographic Findings:

The left breast mammogram is normal. The right MLO view reveals a large bulge of the implant superiorly. The MR demonstrates multiple low signal intensity curvilinear lines floating in the high signal gel ("linguine sign").

Discussion:

Since 1963 approximately two million American women have used silicone gel implants for augmentation (80%) or reconstruction after mastectomy (20%). Recently, there has been an increase in public attention to implant rupture due to a possible link between silicone gel implants and autoimmune disease. This concern was exacerbated by the April 1992 FDA moratorium on cosmetic use of silicone gel filled implants. This has prompted a need for a reliable noninvasive method to assess implant integrity.

Implant ruptures may be intracapsular or extracapsular. In intracapsular rupture, the silicone is contained by the surrounding fibrous (reactive scar tissue) shell. Mammography may be normal or reveal a contour bulge. The positive predictive value of a contour bulge is 54%, meaning approximately half of all implants with bulges are intact. Ultrasound is approximately 56% sensitive and 87% specific for intracapsular rupture. MRI is 96% sensitive and specific for intracapsular rupture because it is exquisitely sensitive to the internal architecture of the implant. The linguine sign is the demonstration of the collapsed elastomer shell floating in the silicone gel.

Extracapsular rupture involves silicone extending through a break in both the elastomer shell and the fibrous capsule. Mammography will often demonstrate the free silicone as one or more soft tissue masses. Free silicone has a characteristic "snowstorm" appearance on ultrasound. MR also accurately identifies the free silicone and documents integrity of the implant shell. Severe "gel bleeds" through an intact elastomer shell can present with free silicone as well, a pitfall for mammography and ultrasound.

To be efficacious, MRI requires surface coil imaging using fast spin echo (to decrease motion) and fast inversion recovery (to characterize free silicone). Body coil MR is about as accurate as US and is not cost effective.

References:

1. Mund DF, et al. MR imaging of the breast in patients with silicone gel implants: spectrum of findings. *AJR* 1993; 161:773-778.
2. DeAngelis GA, de Lange EE, Miller LR, Morgan RF. MR imaging of breast implants. *Radiographics* 1994; 14:783-794.
3. Berg WA, et al. Diagnosing breast implant rupture with MR imaging, US and mammography. *Radiographics* 1993; 13: 1323-1336.

Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

Contributor: W. Bradley Pierce, M.D. is associated with Radiology Consultants in Little Rock.



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Medicine in the News

HEALTH CARE ACCESS FOUNDATION

As of May 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 10,749 medically indigent persons, received 17,313 applications and enrolled 34,774 persons. This program has 1,684 volunteer health care providers including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

OKLAHOMA PSYCHIATRISTS AID SURVIVORS, FAMILIES, AND RESCUERS IN WAKE OF BOMBING

Oklahoma psychiatrists say that survivors, their families, and rescuers are at high risk to develop post-traumatic stress disorder — PTSD — which may surface months or even years after the event. Already prepared with a disaster plan, their response to the bombing was led by John Poarch, M.D. who worked with survivors and their families after an explosion at an Oklahoma elementary school a few years ago.

While the focus of public attention is on the families of victims and on survivors of the bombing, psychiatrists report that rescue workers also are at a high risk of developing Post-traumatic Stress Disorder, a mental disorder marked by symptoms which can include flashbacks; reenacting the traumatic event in a state that can be mistaken for sleepwalking; powerful nightmares; sudden, painful onslaughts of emotion, as well as diminished emotional capacity overall; sudden irritation and explosiveness and exaggerated startle responses; panic attacks; and avoidance of future situations that may recall the trauma. Those suffering with Post-traumatic Stress Disorder may attempt to rid themselves of these frightening and painful symptoms through alcohol or drug abuse, and also may be at risk for suicide. Behavioral and psychodynamic psychotherapy, self-help groups, and antidepressant medications are important treatments for this serious psychiatric disorder. *The APA offers a free Fact Sheet, When Disaster Strikes..., as well as a pamphlet on PTSD. To obtain copies call the APA's Division of Public Affairs at (202) 682-6220.*

TOO FEW CHILDBEARING WOMEN TAKE FOLIC ACID

Recent intervention studies strongly suggest that if women consumed 0.4 mg of folic acid a day around the time of conception, it would prevent at least half of all neural tube defects in newborns. The U.S. Pub-

lic Health Service has recommended routine use of folic acid since 1992. A surveillance study, however, suggests that few prospective mothers are following this advice.

The South Carolina Department of Disabilities and Special Needs monitored the occurrence of neural tube defects from 1992 to 1994, finding 105 cases in about 72,500 live births (14.5 cases per 10,000). Only 8% of the 71 mothers interviewed reported having used folic acid-containing supplements around the time of conception. In contrast, 12% of a sample of 60 South Carolina women giving birth to unaffected babies during the study period reported taking such supplements. Both figures were lower than the Public Health Service's 1992 estimate that 20% of all U.S. women were consuming a multivitamin containing 0.4 mg of folic acid.

About 2500 babies are born with spina bifida or anencephaly in the U.S. each year. It seems we have a long way to go in reducing this figure.

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Dr. Kevin Beavers, an internist at Millard-Henry Clinic, was inducted as a fellow of the American College of Physicians in ceremonies during a recent convention of the organization in Atlanta, Ga. He was recently elected vice speaker of the house of delegates of the Arkansas Medical Society.

Dr. George Jackson, of Cherokee Village, was a guest speaker at the Concerned Women for America meeting held recently at the Peace Lutheran Church in Cherokee Village. He spoke on the topic of RU-486, the so-called "French abortion pill."

Dr. Edward McCollum, of Decatur, was recently certified as a medical review officer by The American Association of Medical Review Officers, Inc., a non-profit medical society dedicated to establishing national standards and certification of medipractitioners and other professionals in the field of drug and alcohol testing.

Dr. George K. Mitchell, of North Little Rock, has been named the 1995 Hendrix College Distinguished Alumnus. He received his bachelor of arts degree from Hendrix in 1952 and has served on the board and as a trustee of the college.

Dr. Taylor Prewitt, an internist and cardiologist in Fort Smith, has assumed office and will serve a four-year term as governor for the Arkansas Chapter of the American College of Physicians.

Dr. Milton Waner, of Little Rock, has introduced a new skin resurfacing technique at the University of Arkansas for Medical Sciences. The school says it is the only facility in Arkansas offering the new "laser brasion" or "laser resurfacing." The skin resurfacing technique is a new alternative to two established procedures: dermabrasion and the chemical peel.

Dr. R. Timothy Webb, of Hot Springs, has been elected a fellow of the American College of Physicians.

Dr. James R. Weber, of Jacksonville, will travel to the former Soviet Union with his wife, the former Cynthia Weintraub, in October. They will represent the U.S. State Department and the AAFP in a joint venture with Physicians With Heart to furnish \$6 million of medical supplies.

Dr. Morton C. Wilson, of Fort Smith, recently received a Distinguished Senior Employee Award from Arkansas ABLE. Wilson was nominated for the award by the Area Agency on Aging of Western Arkansas, the Sparks Regional Medical Center and the Holt-Krock Clinic. The awards recognize individuals, aged 55 and older, who exhibit exemplary work performance and on-the-job skills.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of April are as follows:

Ted Eugene Ashcraft	Russellville
James Claude Bethel	Little Rock
Jimmy Darrell Bonner	Paragould
Douglas A. Buckley	Paris
Peter James Carroll	El Dorado
Dennis O. Davidson	Batesville
John Carroll Dobbs	Conway
Hugh Garland Donnell	Rogers
Alan Dean Flanagan	Fort Smith
Richard Lee Hayes	Jacksonville
Robert Ray Hull	Rogers
Christopher S. Johnson	Rogers
James Laurence Jones	Fayetteville
Eugene Allen Joseph	Searcy
Charles Austin Ledbetter	Harrison
Jack Lindsey Magness	Fort Smith
David Armstrong Miles	Little Rock
David Mishkin	Bella Vista
Robert Howard Nunnally	Camden
Donald Harris Pennington	Van Buren
James Davis Russell	Blytheville
Eugene A. Shaneyfelt	Manila
John D. Smith	Conway
Joanne Sylvia Szabo	Little Rock
Stanley Dane Teeter	Russellville
Kenneth Blair Turner	Russellville
Charles Allan Vermont	Prescott
Samuel Bradley Welch	Little Rock
John Doyle Wise	Little Rock

In Memoriam

Karlton Kemp, M.D.

Dr. Karlton Hubert Kemp of Texarkana died Wednesday, March 29, 1995. He was 82.

Survivors include his wife, Nancy Kemp of Texarkana; one son, Karlton Kemp Jr. of Texarkana; one stepson, John F. Thomas of Minneapolis, Minn.; five daughters, Katherine Kibler and Susie Mackie of Houston, Texas, Marcia Sterling of Palo Alto, Calif., Lou Dye of Omaha, Neb., and Carol Allen of Seattle, Wash.; one sister, Katherine Hanes of Urbana, Ill.; and 18 grandchildren.

Resolution

Karlton Hubert Kemp

Whereas, Karlton Hubert Kemp has been a member of our Society for many years; and

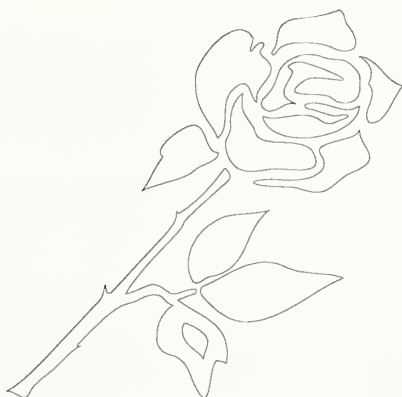
Whereas, he has earned the respect and the affection of the members of this Society as a friend, as an associate and as a fellow practitioner of medicine, and his wise and friendly counsel in the conduct of the medical society affairs;

Be it therefore resolved that we are most deeply grieved over the loss of this our friend and fellow doctor, and that this loss will be greatly felt by us and will be softened only by the passage of time.

Be it further resolved that a copy of this resolution be spread upon the minutes of this Society and that another copy be sent to his family.

Donald C. Fournier, M.D., President
Bowie County Medical Society

Joseph R. Robbins, M.D., President
Miller County Medical Society



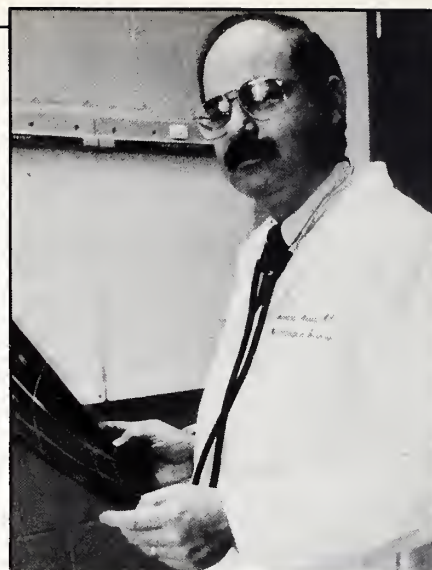
Sure... you're a good physician, but can you write?

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Things To Come

July 30 - August 4

Update in Internal Medicine, 1995. The Waldorf-Astoria, New York, NY. Sponsored by Columbia University College of Physicians and Surgeons, Center for Continuing Education and the Departments of Medicine of Columbia Presbyterian Medical Center and Beth Israel Hospital Boston. For more information, call (617) 324-2202.

August 20-25

Advance in Internal Medicine. Hyatt Regency, Monterey, California. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

August 28-31

Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 16

Benign Essential Blepharospasm - 13th Annual International Conference & Scientific Symposium. Red Lion Hotel, Sacramento, California. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 30 - October 1

7th Annual Ultrasound Update: 1995. Red Lion Hotel, Sacramento, California. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

October 5 - 7

Contemporary Cardiothoracic Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

October 8 - 12

Medical Oncology Board Review Course. The Ritz-Carlton Pentagon City, Arlington, VA. Sponsored by the Office of Continuing Medical Education, The George Washington University Medical Center. For more information, call (202) 994-4285.

October 13 - 15

"Advances in Sonography," - a fourth annual post-graduate educational course. Sheraton Chicago Hotel and Towers, Chicago, Illinois. Sponsored by the Center for Bio-Medical Communication. Designated for 17.75 credit hours of Category 1 of the Physician's Recognition Award. For more information, call (201) 385-8080.

November 3-5

7th Annual Infectious Disease Review Course for the Practicing Physician. Hyatt Regency Bethesda in Bethesda, Maryland. Sponsored by The Society of Radiologists in Ultrasound. For more information, call (201) 385-8080.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.



July 18

Nurses Workshop on HIV/AIDS and Perinatal Patients

A workshop for nurses who work in obstetrical and family practice offices, hospital obstetrical services and AHECS will be given at St. Bernard's Hospital in Jonesboro on July 18. The workshop will be presented from 8:30 a.m. to noon and repeated from 1:00 p.m. to 4:30 p.m. Presenters will be nurses who work daily with HIV infected mothers and newborns at University Hospital in Little Rock. The workshop is co-sponsored by the Delta Region AIDS Education and Training Center at UAMS and by St. Bernard's Hospital. There is no charge for the workshop, but pre-registration is required. For further information, call Debbie Lockridge, St. Bernard's Hospital, 972-4436.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

Medical Grand Rounds, Thursdays, 12:00 noon, Conference Room, Bldg. 4

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Joint Tumor Conference, 1st Wednesday, 12:00 noon, CARTI Auditorium. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Urology Grand Rounds, Tuesday, May 2, 5:30 p.m., Southwestern Bell/ARKLA room. Refreshments provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

GI Conference, 4th Friday, 11:30 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Clinical Conference, Mondays, 4:00 p.m., UAMS, room 3S06

Cardiology Graphics Conference, Wednesdays, 12:00 noon, UAMS, room 3S06

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

Emergency Medicine Didactic Conference 1, Thursdays, 12:00 noon. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 1:00 p.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 3:00 p.m., UAMS Education Bldg., room B/106A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 4:00 p.m., UAMS Education Bldg., room B/106A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:15 p.m., Radiology Conference Room at UAMS

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room

Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room

Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Behavioral Sciences Conference, 1st & 4th Friday, 12:30 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:30 p.m., Warner Brown Hospital
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:30 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:30 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, AHEC - South Arkansas. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Pediatric Conference, 3rd Friday, 12:30 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:30 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:30 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:30 p.m., AHEC - South Arkansas

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Fridays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Thursdays, 7:30 a.m., Washington Regional Medical Center
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conference, June 23, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital



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American Physicians Insurance Exchange	inside front
Care Network	1
<i>The Alan Rothman Company, Inc.</i>	
Central Arkansas Rehabilitation Hospital	back cover
Freemyer Collection System	16
Little Rock VA Medical Center	20
Lightfoot & Bennett	16
Med Plus Leasing	50
<i>Creative Advantage</i>	
Medical Arts Laboratory	54
Medical Protective Company	53
<i>Williams Marketing Services</i>	
Radiology Resources	8
Riverside Motors, Inc.	4
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	inside back
<i>Strategic Marketing</i>	
Spectrum Health Care Services	20
State Volunteer Mutual Insurance Company	2
<i>The Maryland Group</i>	
Tommy Farrell Associates	55
U.S. Air Force	20
<i>BJK&E Specialized Advertising</i>	
U.S. Army (Active)	46
<i>Young & Rubicam</i>	
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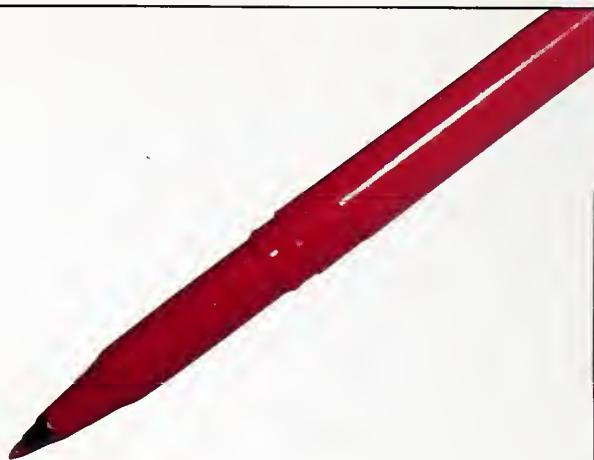
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CONTENTS

FEATURES

- | | |
|----|--|
| 68 | Getting EMS Into the Emergency Room
<i>Editorial</i>
Samuel E. Landrum, M.D., F.A.C.S. |
| 71 | Emergency Physicians and AMS Update Equipment in State Capitol Infirmary
Z. Lynn Zeno |
| 72 | Bicycle/Automobile Accidents in Arkansas 1991-1993
<i>Special Article</i>
Robert A. Lambert, M.D., F.A.C.C. |
| 75 | Common Bacterial Sexually Transmitted Diseases in Pregnancy
<i>Scientific Article</i>
Paul J. Wendel, M.D.
George D. Wendel, Jr., M.D. |
| 79 | Post Cesarean Section Death
<i>Loss Prevention Case</i>
J. Kelley Avery, M.D. |

DEPARTMENTS

- | | |
|-----|--------------------------------|
| 81 | Cardiology Commentary & Update |
| 84 | State Health Watch |
| 88 | Arkansas HIV/AIDS Report |
| 90 | New Members |
| 93 | Radiological Case of the Month |
| 101 | Medicine in the News |
| 103 | AMS Newsmakers |
| 104 | In Memoriam |
| 104 | Resolution |
| 107 | Things to Come |
| 108 | Keeping Up |

Cover photo of sunflower field near Petit Jean was taken by A.C. Haralson, Arkansas Department of Parks and Tourism.

Getting EMS Into The Emergency Room

Samuel E. Landrum, M. D., F. A. C. S.

There has been over a quarter century of visionary work, training, and implementation of a pre-hospital Emergency Medical System in this country and more particularly in Arkansas. The first modest course for ambulance personnel in Western Arkansas was in October 1969. It consisted of seven weekly classes at night for two hours each and covered such topics as wound care, splinting, establishing and maintaining airway, very basic CPR, and special problem areas. There was a mix of lectures and practical application of techniques all taught by physicians who were willing to donate time to such an endeavor. The course was attended by 120 persons! They were involved in ambulance services in the six county region. Those providers had no standard course or text available to receive training in life-saving methods at accident scenes. Nothing beyond Red Cross or Boy Scout manuals existed until the late 1960s when the Academy of Orthopedics orange text was published. It was quickly and rightly accepted as a major advance.

In 1972, the federal government became aware of a need for the development of EMS Systems with the goal of nationwide coverage by trained personnel for responding to all sorts of medical emergencies that occurred outside the hospital. Grants were awarded for demonstration programs in five areas. Arkansas was successful in receiving monies to design a system for a rural state, to train Emergency Medical Technicians, and to purchase communication equipment and properly equipped vehicles in the several Economic Development Districts as configured then. This involved many meetings of committed physicians, educators, planners, Arkansas Health Department staff, hospital administrators, legislative committees, and the staffs of Gov. Bumpers and Gov. Pryor. It was not easy.

Since then, several training centers have come about for EMTs and EMT-Paramedics, many of whom receive ongoing training at colleges across Arkansas.

These dedicated professionals now save many victims who would not have reached the hospital alive prior to the development of EMS. One unreached goal of the EMS System as yet is reliable statistical information and analysis about the impact it has had.

The preceding introductory background leads to consideration of the response of providers in the hospital and what advances are broadly available in emergency rooms of this state.

Knowledge of better care for cardiac, respiratory, behavioral, and other non-traumatic emergencies continues to spread and find application by physicians who practice Emergency Medicine. During the quarter century while pre-hospital EMS emerged and made tremendous strides, there became a recognized Board of Emergency Medicine; and residencies now exist for this specialty. However, there are not enough boarded doctors to staff all the emergency rooms all the time. These staff slots are filled by physicians with a variety of previous interests, and most have been trained in Family Medicine. Moonlighting residents from numerous specialties fill these slots for a significant amount of the time. My observation is that the residents perform this duty mostly on weekends; that is, a time when hospitals rarely are fully dressed for the diagnostic or

therapeutic needs of major trauma victims. Also, consulting staff to get patients operated on in a timely manner may not be as immediately available as required.

While many of us interested in this area are zealous for still considerable improvement in the care provided in emergency rooms, we recognize that there are limits in all resources needed. Perfection escapes us! So shall it ever be, but that attitude does not serve patients well, and it will hamper improvement in our daily habits. So let us reflect on what is available that will let us do better without undue expense.

TRAINING: Not all patients who come with serious emergencies will be attended by a specialist for their particular needs. However, there are good courses of a couple of days length that are offered that improve the ability of most any doctor to provide competent life-saving care to accident victims. It seems

While many of us interested in this area are zealous for still considerable improvement in the care provided in emergency rooms, we recognize that there are limits in all resources needed.

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that ACLS has been widely embraced, and this is applauded. Less widely embraced is the Advanced Trauma Life Support (ATLS) Course. This course teaches a logical systematic approach to the care of seriously injured persons regarding airway, ventilation, shock management, orthopedic and neurological problems, triage and transfer protocols. Special sections deal with burns, children, and pregnancy as related to trauma. It seems that it should be mandatory that all physicians who practice emergency medicine, even as a part-time pursuit, will have successfully completed these two important courses to gain credentials to practice in an emergency room. This recommendation for ATLS applies equally strongly for practicing surgeons who take "trauma call." The American Burn Association offers a similar course for burned patients, and there is also a Pediatric Advanced Life Support Course.

ENVIRONMENT: Emergency rooms are too cold. Exposed patients, especially if injured, have their problems of resuscitation aggravated significantly by hypothermia. Coagulation, respiratory, and cardiac problems can ensue simply by allowing these patients to remain unwarmed. The best ambient temperature for someone who has a sizable burn is 80° F. Can you imagine the protest this would engender on the part of the ER staff? Warm blankets and the recently available warming devices will counteract the chill. Warmed resuscitation I.V. fluids are beneficial in this setting.

Another often ignored environmental factor is the

wearing of masks and sterile gloves to care for burns. The hands and noses of the hospital staff are the most frequent wound contaminants for these patients. Yet rarely is this practice observed.

CONSULTANTS: Most patients in the ER who need to be admitted will enter the service of staff members who are on call for this duty or opportunity. The willingness of doctors who will accept this responsibility and respond promptly is in short supply. Recent surveys indicate that few surgeons in training expect this activity to contribute to their practice in a beneficial way. Surely the income from taking call is often lacking, and the unexpected nature of emergencies interferes with the conduct of busy practices. The timing of night-long trauma surgery can be fatiguing. Nonetheless, the two classic indications for surgery are to stem blood and let pus. These procedures are the ones that provide the work for emergency surgery. Perhaps the motivation for surgeons should be stimulated to keep us mindful of our calling.

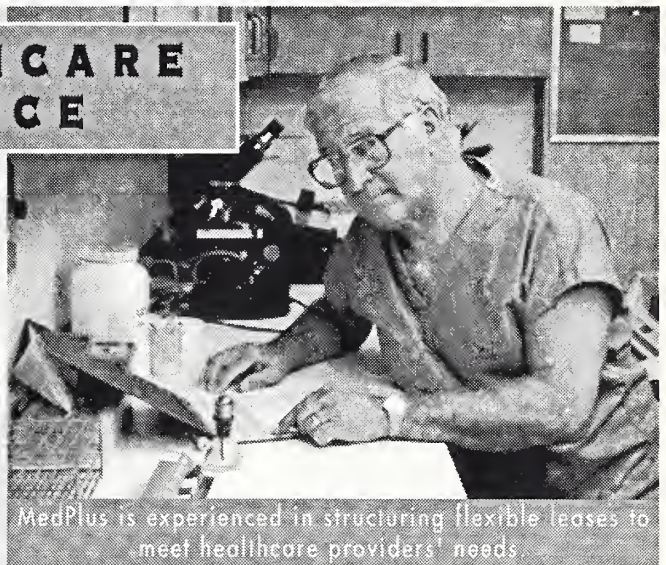
To summarize, the last quarter century has seen pre-hospital care undergo a revolution from primarily a transportation service to one of significant life saving in the field and reduction of disability. We should continue to strive to upgrade entrenched habits of care in emergency rooms so that the trauma patient arrives alive and does not die for lack of optimal treatment in the hospital. Some rather simple recommendations will contribute to this goal.

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Emergency Physicians and AMS Update Equipment in State Capitol Infirmary

Z. Lynn Zeno, AMS Director of Governmental Affairs

For many years the Arkansas Medical Society through its "Doctor of the Day" program has provided a valuable service to legislators and visitors during regular sessions of the Arkansas General Assembly.

AMS member physicians from throughout the state volunteer a day of their time to travel to the state capitol to visit with their legislators, observe the proceedings, and provide needed medical care at the Capitol Infirmary. The Capitol Infirmary is located in space provided by the Secretary of State and the doctor of the day is assisted by a nurse provided by UAMS. Various pharmaceutical companies contribute medication for use in the program along with samples often donated from visiting physicians.

This year, the Arkansas Chapter of the American College of Emergency Physicians procured a "Lifepack 300" defibrillator through the generosity of the Physiocontrol Corporation. The portable defibrillator, which reverses cardiac arrest, greatly enhances the

emergency capabilities of those medical professionals serving at the Capitol Infirmary.

In addition, the Arkansas Medical Society donated a Stat Kit of emergency supplies with additional medication provided by the UAMS pharmacy for use by the volunteer physicians.

Representative Bobby Hogue, Speaker of the House, said, "The volunteer efforts of Medical Society members do not go unnoticed by members of the General Assembly. Every member of the legislature is grateful to Arkansas' Emergency Physicians for providing this updated equipment furthering the capabilities of the dedicated volunteers."

AMS Governmental Affairs Committee Chairman Charles "Shot" Rodgers, MD., Secretary of State Sharon Priest, and Paul Robinson, MD., current president of the Arkansas Chapter of ACEP, examine the "Lifepack 300" defibrillator and the Stat Kit recently donated to the State Capitol Infirmary.

Bicycle/Automobile Accidents in Arkansas 1991-1993

Robert A. Lambert, M.D., F.A.C.C.*

Bicycling is frequently recommended as a form of aerobic exercise to reduce the risk of cardiovascular events, yet it is not without safety risks. The recent accidental death of a locally-known cyclist has raised safety concerns of recreational cycling on Arkansas roads. This article summarizes cycling accident statistics obtained from the Arkansas State Highway and Transportation Department for a three year period.

On February 18, 1995, Floyd Lorenz Shafer, age 83, was struck and killed by an automobile as he rode his bicycle on the shoulder of Highway 10 west of Little Rock. Dr. Shafer, who had received his doctorate in biology at age 75, was an avid cyclist. He rode regularly for fitness; the previous fall he had participated in a 150 mile charity ride for multiple sclerosis.

Dr. Shafer's death raises concern about the safety of recreational bicycling. Just as reports of sudden death during running have shaped medical advice regarding jogging, a physician's recommendation of bicycling as a means of aerobic exercise must be based on knowledge of its risks.

Unfortunately, the risks of recreational cycling have not been rigorously studied, either nationally or locally, and opinions are often based on personal experience or conjecture. This report summarizes accident data obtained from the Traffic Safety section of the Arkansas State Highway and Transportation Department. The Section collects all accident reports filed by municipal, local, and state law-enforcement officers statewide; it represents the most comprehensive database available to investigate local accidents involving motor vehicles and bicyclists.

METHODS

Accident reports involving "pedacyclists" (bicyclists) were requested for the last three years in which data was available. Reports were generated for each year for: on vs. off roadway, severity of injury, whether alcohol was involved, location by population of surrounding area, location by trafficway type, time and day of week, road surface condition, light condition, road profile, whether vehicle vision was obscured, relation to junction, intersection type, and age of pedacyclist.

A report detailing the street or highway location of each accident was also generated.

Data was combined for the three years and evaluated for predominance of factors in each report. As children less than 15 years old accounted for 61% of all accidents, a second set of reports were requested to focus on adult cyclists. These reports included day vs. night, urban vs. rural location, relation to junction, intersection type, and location by county and street or highway. The adult data for the three years was combined and similarly screened for predominance of contributing factors.

RESULTS

During 1991-1993, a yearly average of 229 motor-vehicle accidents occurred which involved bicyclists; 4-7 each year (2-3%) resulted in the cyclist's death (see Table 1).

There was wide variation in the age of the cyclists involved in accidents, but the majority were children less than 15 years old (see Table 2). Fatalities occurred in both the younger and older age groups.

Only a minority, 10%, of accidents reported occurred in a rural area (72 of 686). Urban accidents occurred in a wide range of population environments with the largest incidence in cities of 50,000-99,999 inhabitants (202 of 686, 29% of total accidents).

A majority of accidents occurred on roads described as local (430/686 or 63%), as opposed to collectors, ar-

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terials, or expressways.

Half of all accidents occurred between 3 PM and 7 PM. Five of the fourteen (36%) fatalities occurred after dark. Of note, 60% (411/686) of accidents occurred at intersections rather than in alleys or driveways (17%) or non-junctions (28%). Four-way intersections were the most common site.

Conditions which might impair the motor-vehicle driver's ability to avoid a bicyclist were notably non-predominant. Alcohol was involved in only 4% of accidents and the road was described as wet or slick in 8%. Most accidents occurred on level roads; only 20% involved a hill, hillcrest, or sag. Surprisingly, only 9% of accident reports indicated the driver's vision was obscured by reflected glare, sunlight, rain, or trees.

As this report was oriented to evaluating the safety of bicycling as an adult form of aerobic exercise, data was re-analyzed to eliminate potential confounding factors specific to children. In the accidents involving cyclists 15 years and older, again, only a minority occurred in a rural setting (12%) and most occurred during daylight hours.

Accidents occurred with respect to roadway intersections in a similar frequency (Table 3); 55% occurred at an intersection, again most commonly four-way.

Sites of repeated (>2) accidents involving adult cyclists during 1991-1993 are summarized in Table 4 by county and specific highway or street.

COMMENTS

While the Arkansas Highway Department data is the most comprehensive local data available, it cannot be assumed to represent an accurate reflection of risks posed to cyclists. First, an unknown number of accidents occur that are not reported to law enforcement officers and thus are not included in this report. Secondly, a large number of cycling accidents do not involve motor vehicles: simple falls, collisions with other cyclists or dogs, etc., that would not require law enforcement reporting.

Table 1
Bicycling/Automobile Accidents

Accidents	1991	1992	1993
Fatal	7	4	6
Nonfatal	236	204	200
Total	241	208	237

Table 2
Accidents By Age

	1991	1992	1993
<u>Fatalities</u>			
age 0-14	4	3	3
age >14	3	1	3
<u>Injuries</u>			
age 0-14	131	115	143
age >14	83	80	85

It is also important to recognize that this information is simply occurrences, not the risk of an occurrence, i.e., the number of events divided by the number of exposures to such an event. That only 10% of bicycling accidents in the database occurred in rural areas does not imply that it is safer to bicycle on rural roads; most cyclists live in urban areas and presumably are more likely to bicycle in urban areas. Without an actual count of bicyclists exposed to a given condition, accident reports with regard to a condition cannot be assumed to imply causality.

Recognizing this limitation, however, the data is useful. While Dr. Shafer's death raises concern, it should be recognized that death as a result of an automobile/cyclist accident is uncommon (2-3% accidents). Actual risk is probably less given that many accidents may be unreported. Dr. Shafer died at a "non-junction"; only 28% of all accidents occur by an overtaking vehicle colliding with a cyclist. Dr. Shafer's fatal accident was disturbing but not representative of the overall risk posed to Arkansas bicyclists.

Children on bicycles account for a majority of cycling accidents involving motor vehicles. Of note, the U.S. Consumer Product Safety Commission reported that 61% of injuries occur in cyclists between the age of 5 and 14¹, a statistic identical to this report. The finding underscores the importance of parental supervision of children using bicycles in trafficways.

The statistics, both including children and not, showed that most accidents occur at intersections. This finding was also seen in a study of bicycling accidents in Palo Alto, CA,² where 74% of bicycle/automobile accidents were at intersections. Conceivably, many

Table 3
Accident Relation to Roadway Junction
3 year totals/all ages and cyclists >14 y/o

	All ages	%	>14 y/o	%
At intersection	411	60	162	55
Non-junction	191	28	83	28
Driveway/alley	117	17	43	14

Table 4
Recurrent Accident Locations
>2 occurrences in 3 years/ >14 y/o cyclists

County	Highway #/ Street	# Accidents
Benton	71	3
Garland	7	8
Miller	71	3
Pulaski	70	5
	Rodney-Parham	3
	365	4
	161	4
Sebastian	64	5
	6th St.	3
Washington	112	4
	16	4
	71	3

accidents are preventable if right-of-way rules are more closely followed by cyclists and drivers at intersections.

Other preventative measures to ensure safe cycling are not verified by the data, but are nevertheless still good common sense. Cyclists should avoid riding in the direction of the setting or rising sun when glare blinds an overtaking driver. Riding at night without lights and reflective clothing is dangerous. Use of an approved helmet is mandatory in some states; estimates are that three-fourths of deaths or serious injury to cyclists involve head injury and that three-fourths of head injuries would not occur if an approved helmet is properly used.

An opinion exists that bicycles are "toys" and advocate banning bicycles from roadways as a means of accident prevention. The Palo Alto study indicates that the risk of accidents (including involvement with other cyclists and pedestrians) is nearly twice as high when cyclists travel on sidewalks or bike paths. Because many adult cyclists travel at speeds of 18-25 mph, many traffic engineers recommend integration of cycling in the roadway by provision of wide, paved shoulders or outside lanes.

Responsible bicycling should be encouraged by Arkansas physicians. Arkansas ranks high nationally in the incidence of obesity; discussion of an exercise program for fitness and weight control should be part of patients' annual physical. While this report focuses on the major risk of cycling, collision with automobiles, it should be recognized that cycling is an excel-

lent form of aerobic exercise. As opposed to walking or running, cycling is non-weight bearing and thus therapeutic, rather than detrimental, to lower extremity joint or muscular problems. Bicycling is fun, particularly in a state with a relatively mild climate, an abundance of rural roads, and varied scenic terrain. The benefits of cycling far outweigh its risks.

CONCLUSION

Bicycling should be encouraged as aerobic exercise for weight control and to reduce risk of cardiac events. Death from collisions with automobiles is uncommon. Most accidents occur in children and at intersections. Efforts to reduce bicycling accidents should be directed at parental supervision of children while cycling and observance of traffic laws governing intersections.

ACKNOWLEDGEMENTS

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Common Bacterial Sexually Transmitted Diseases in Pregnancy

Paul J. Wendel, M.D.*

George D. Wendel, Jr., M.D.**

INTRODUCTION

Sexually transmitted diseases (STDs) occurring during pregnancy can have significant effects on both maternal and neonatal outcome. When all bacterial, viral and parasitic STDs are considered together, they may represent the most common infectious complication of pregnancy. The patients at highest risk for many STDs are indigent, sexually active, single adolescents living in an urban environment. However, many adults are also unable to identify themselves as being at risk for carrying STDs. As a result, many clinicians are now screening their prenatal patients for many of the common STDs such as syphilis, gonorrhea, chlamydia, hepatitis B virus, human immunodeficiency virus (HIV), and indirectly human papillomavirus (HPV) infection.

This discussion will review the effects of the common bacterial STDs on pregnancy and how pregnancy affects these STDs. We will also discuss the management of the STDs in pregnancy.

CHLAMYDIAL INFECTION

Chlamydia trachomatis is the most common bacterial STD in women.¹ *C. trachomatis* may be cultured from the cervix of 2-24% of gravidas depending on the socioeconomic background of the population. High risk women are teenaged, single, indigent, have multiple sex partners or have other STDs, especially gonorrhea. Chlamydial infections are associated with many common clinical syndromes such as urethritis, mucopurulent cervicitis and salpingitis. However, many pregnant women have asymptomatic or subclinical cervical infections. In pregnant women, the finding of mucopurulent cervicitis may not reliably predict infection with *C. trachomatis*, as it does in non-pregnant women.

Several studies have attempted to measure the effect of chlamydial infection on pregnancy outcome, but its role remains controversial. It can cause neonatal conjunctivitis and infantile pneumonia. Some investigators have found untreated maternal cervical chlamydial infection associated with an increased risk for preterm delivery, premature rupture of membranes (PROM), stillbirth, and perinatal death.^{2,3} Others have found only women with recent chlamydial infection, defined by a positive culture and anti-chlamydial IgM antibody, at risk for low birth weight, PROM and preterm delivery.⁴ Further investigations are necessary to determine the role of *C. trachomatis* in complicating pregnancy.

A delayed postpartum (up to three weeks after delivery) endometritis has been associated with *C. trachomatis* infection. It usually is diagnosed after discharge from the hospital and causes vaginal bleeding or discharge, low grade fever, lower abdominal pain and uterine tenderness. This syndrome is distinct from early endometritis which typically occurs 2-5 days postpartum.

Diagnosis

Universal screening for *C. trachomatis* infection during pregnancy is controversial. Current methods (silver nitrate, erythromycin, or tetracycline ointment) to prevent neonatal gonococcal and chlamydial ophthalmic infection, may still result in chlamydial conjunctivitis in up to 20% of exposed neonates. The Centers for Disease Control and Prevention (CDC) recommend *C. trachomatis* diagnostic testing during the first prenatal visit for all pregnant women and again during the third trimester for those at high risk.¹ High risk markers include: age < 25 years, prior or current other STDs, a new sex partner in the preceding three months, or multiple sex partners.¹ The ability of the widespread chlamydial detection and treatment programs to prevent associated maternal and neonatal complications has not been thoroughly investigated.

The diagnosis of chlamydial cervical infection in pregnancy is usually made from asymptomatic women

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by cell culture. The specificity of cell culture is near 100%, but the sensitivity is 70% to 90%, especially when detecting small numbers of organisms in asymptomatic pregnant women. The advantage of accuracy is compromised by cost and difficulty in collection, storage, transport and analysis.

The CDC's aggressive chlamydia prevention strategies depend on the expanded use of non-culture tests for *C. trachomatis* screening.¹ Direct Fluorescent Antibody (DFA) and Enzyme Immunoassay (EIA) tests have been extensively evaluated and are in wide use. In general, the sensitivity (>70%) is dependent on adequate specimen collection. Specificity can be problematic with some LPS-based EIA methods, for cross-reactivity occurs with other bacteria. A blocking antibody assay can exclude such cross-reaction and be used to verify initially positive EIAs. Nucleic acid hybridization (DNA Probe) tests recently have been developed, and *N. gonorrhoeae* and *C. trachomatis* can now be identified from the same collection swab. There is limited clinical validation of the new method's accuracy in pregnant and postpartum women. In general, the non-culture test false-positive rates in low prevalence pregnant populations yield lower positive predictive values for actual chlamydial infection. This means that some clinicians may choose to confirm positive non-culture tests with a second method prior to diagnosis and treatment of asymptomatic infection in pregnancy.¹

Treatment

Current CDC recommendations for the treatment of cervical infections with *C. trachomatis* in nonpregnant women have recently changed adding a new macrolide antibiotic, azithromycin.^{1, 5} Due to its extremely long serum half life, azithromycin orally in a single dose is adequate for treatment of uncomplicated cervical infections. Azithromycin is an FDA Category B drug (animal-reproduction studies have not demonstrated a fetal risk, but there are no controlled studies in pregnant women). Thus, the safety and efficacy of azithromycin for pregnant women and fetuses have not yet been established.

Erythromycin base or ethylsuccinate taken orally for at least 7 days should eradicate maternal infection in over 90% of cases (Table 1). For women unable to tolerate erythromycin due to gastrointestinal side effects or emesis gravidarum, the dosage may be reduced by one half and the duration of therapy doubled. There are limited clinical data that amoxicillin and clindamycin

orally have comparable efficacy in pregnancy. Erythromycin estolate, tetracyclines, and quinolones should not be used in pregnancy. Sexual partners within the prior 30 days of an infection should be examined and treated for chlamydial infection.

GONORRHEA

The prevalence of gonorrhea in pregnancy is quite variable, ranging from 0.5% to 7.0% and generally reflects the high risk status of the prenatal population sampled. In the last few years, there has been a significant, but poorly understood decline in the incidence of gonorrhea in heterosexuals in the United States. Low rates are observed in private practices, while higher frequencies plague urban hospital clinics. Once again this reflects the frequency of the many risk factors in the prenatal population: being single, adolescence, poverty, drug abuse, trading sex for drugs, other STDs, and adequacy of prenatal care. Unfortunately, gonococcal infections also serve as a marker for concomitant chlamydial infection in approximately 40% of infected pregnant women.⁵

Gonococcal infection occurs most commonly as asymptomatic cervical carriage in pregnancy.⁶ About 30% of gravidas with endocervical gonorrhea also have concomitant rectal infection, probably due to local spread from vaginal discharge. Acute salpingitis has been reported and can occur if cervical infection ascends into the adnexae before pregnancy or prior to obliteration of the uterine cavity which occurs at approximately 12 weeks gestation. Reactivation of prior salpingitis may also occur and result in tubo-ovarian abscess formation. The diagnosis of acute gonococcal salpingitis can be made only after the exclusion of other

clinical entities which include appendicitis, septic abortion, adnexal torsion, and ectopic pregnancy. Due to our inability to culture the upper genital tract in pregnancy and difficulty diagnosing salpingitis, it is reasonable to consider laparoscopic evaluation in pregnancy prior to initiating treatment. Rarely, gonococcal septicemia can lead to dis-

seminated gonococcal infection with dermatitis and arthritis.

Gonococcal infection can affect pregnancy outcome in any trimester. There is an association between untreated gonococcal cervicitis and septic abortion and post-abortion endomyometritis. Preterm delivery, PROM, chorioamnionitis, and postpartum endomyometritis are more common in women with intrapartum cervical *Neisseria gonorrhoeae*. It is uncer-

Table 1.
Treatment of *Chlamydia trachomatis* in Pregnancy

Azithromycin 1 gram orally in a single dose
Erythromycin base 500 mg orally 4 times daily for 7 days

Alternative Regimens

Erythromycin ethylsuccinate 800 mg orally 4 times daily
for 7 days or (if erythromycin cannot be tolerated)
Amoxicillin 500 mg orally 3 times daily for 7 to 10 days*

* Few data exist concerning this regimen

tain whether gonorrhea causes the untoward events, because other bacteria and maternal risk factors contribute to those events. Regardless of the role of *N. gonorrhoeae* in obstetric complications, its presence places the patient at high risk. Consequently, screening cervical cultures are frequently recommended at the first prenatal visit or before an induced abortion.⁵ In a high risk setting, a repeat culture should be obtained during the third trimester.

Diagnosis

The presumptive and definitive diagnosis of endocervical gonorrhea has been by culture. A gram stain of an endocervical specimen is less sensitive (< 60%) than a positive gram stain from a symptomatic male (> 95%), because nonpathogenic *Neisseria* and related spp. can be normal flora in the vagina and rectum. Recently, DNA probe assays have been introduced that show promising specificity and sensitivity for identification of *N. gonorrhoea*. However, there is limited clinical validation of this methodology in pregnant women with gonorrhea. It is unknown if amniotic fluid or postpartum lochia affects the accuracy of DNA probe tests. However, the new tests do offer ease of collection, transport and storage for remote prenatal clinic settings without local laboratory support.

Treatment

Ideally, the treatment for gonorrhea in pregnancy should be dictated by culture and susceptibility testing. In many areas of the country, the development of antimicrobial resistant *N. gonorrhoeae*, particularly penicillinase producing strains, have rendered beta-lactam drugs ineffective therapy. Current CDC guidelines for the treatment of gonorrhea in pregnancy recommend ceftriaxone or spectinomycin, for those allergic to penicillin (Table 2).⁵ Cefixime orally should be as effective as in adults with gonorrhea, but its safety and efficacy in pregnancy are not established. The quinolones are not used in pregnancy.

A syphilis serology and chlamydial test should precede treatment if possible. However, if chlamydial testing is not performed, presumptive treatment should be administered. Treatment of sexual partners is important to ensure efficacy in pregnancy. Follow-up tests of cure are not routinely recommended by the CDC after gonococcal treatment in adults due to the excellent efficacy of current regimens. Third trimester gonococcal screening is reasonable in women treated earlier in pregnancy.

Infants born to women with untreated prenatal infection are at risk to develop gonococcal ophthalmia. They should be given presumptive therapy with ceftriaxone 25 to 50 mg/kg (maximum dose 125 mg) IM or IV once.⁵

SYPHILIS

Diagnosis

Antepartum syphilis can profoundly affect the outcome of a pregnancy causing preterm labor, stillbirth, and neonatal infection.^{7,9} Pregnancy has minimal effects on the signs and symptoms of early syphilis. Cervical chancres may occur more frequently due to inoculation of the friable pregnant cervix. The diffuse skin changes and alopecia of pregnancy may mask clinical signs of secondary syphilis resulting in delayed diagnosis. Condylomata lata, a manifestation of secondary syphilis, can be mistaken for condylomata acuminata from human papillomavirus. Mucus patches, another sign of secondary syphilis may resemble a genital herpes simplex infection.

Non-treponemal tests such as the Rapid Plasma Reagin (RPR) and Venereal Disease Research Laboratory (VDRL) test are confirmed by specific treponemal antibody tests such as the Microhemagglutination Assay for Antibodies to *Treponema pallidum* (MHA-TP) or Fluorescent Treponemal Antibody Absorption (FTA-ABS) test. The number of false positive syphilis serologies identified in pregnancy are probably not due to the pregnant state, but rather the heightened serologic surveillance which occurs during pregnancy.

Treatment

The treatment of syphilis in pregnancy has not been rigorously evaluated. The goals of therapy are both the eradication of maternal infection and prevention of congenital syphilis in the fetus.⁸ Success in the treatment of early syphilis has been hampered by the difficulty in establishing the efficacy of the therapy. However, it has been observed retrospectively that benzathine penicillin G cures maternal infection and prevents neonatal syphilis in 98% of cases.⁸ The current CDC guidelines for treatment of syphilis in pregnancy have continued

to recommend the same dosage schedule of the long acting penicillin G (see Table 3 on next page).^{5,8} If there is a history of penicillin allergy, skin testing should be performed to identify the risk of an IgE-mediated allergic

reaction. If a penicillin allergy is present, penicillin desensitization should be performed followed by immediate treatment.⁹

Alternative erythromycin therapy is discouraged because of reported treatment failures in preventing congenital syphilis.⁸ Treatment with newer cephalosporins, particularly ceftriaxone, looks promising for early syphilis. However, little is known about placental transfer and fetal drug levels to currently recommend their use during pregnancy.

Prior to the treatment of syphilis, all patients should be offered counseling and testing for HIV anti-

Table 2.
Treatment of Anogenital Gonococcal Infection in Pregnancy

Ceftriaxone 250 mg IM once or
Cefixime 400 mg orally once or
Spectinomycin 2 g IM once

Abbreviation: IM = intramuscularly

body due to the frequency of the co-infection and implications of immunosuppression on success of therapy.⁵ Follow-up of patients treated for syphilis needs to be conscientious. Sexual contacts within the last three months should be evaluated for syphilis and treated presumptively, even if seronegative. Maternal quantitative serologies should be followed monthly and again at delivery to confirm a serologic response to treatment.^{8, 10} The quantitative nontreponemal antibody titer should decline fourfold by 3-4 months for primary or secondary syphilis and by 6-8 months for early latent syphilis.

BACTERIAL VAGINOSIS

Bacterial vaginosis (BV) is a common syndrome that is associated with the replacement of normal vaginal H₂O₂-producing *Lactobacillus* with *Gardnerella vaginalis*, *Mycoplasma hominis*, *Mobiluncus* and several anaerobic species.⁵ BV generally causes a mild vaginal discharge with a fishy odor, caused by bacterial decarboxylase amine formation. There is no change in the prevalence or clinical course of BV in pregnancy.

Bacterial vaginosis has been associated with preterm delivery, PROM, intra-amniotic infection, and postpartum infection.^{3, 10} The bacteria associated with BV are also associated with chorioamnionitis, PROM, some preterm labor and postpartum endomyometritis. It is not surprising that changes in the bacterial cervicovaginal flora might influence these outcomes, but it is also unclear whether eradication of BV will decrease the risks of those events.

Diagnosis

The diagnosis of bacterial vaginosis is made by identifying a thin liquid discharge with a pH ≥ 4.5 , a fishy odor when mixed with 10% potassium hydroxide and clue cells on wet-mount examination. The diagnosis can also be made by interpretation of a Gram stain of a vaginal smear. Symptomatic pregnant women generally show replacement of the nor-

Table 3 - Treatment of Syphilis in Pregnancy

Early Syphilis*

Benzathine penicillin G 2.4 million units IM once

Syphilis of more than 1 year's duration~

Benzathine penicillin G 2.4 million units IM weekly for 3 doses

Alternative Syphilis Treatment Regimens for Penicillin Allergic Patients

Early syphilis

Penicillin after skin testing and desensitization
Erythromycin, 500 mg orally 4 times daily for 2 weeks+
Ceftriaxone, 250 mg IM daily for 10 days^

Syphilis of more than 1 year's duration~

Penicillin after skin testing and desensitization

Abbreviation: IM = intramuscular

* Primary, secondary, and latent syphilis less than 1 year's duration

~ Latent syphilis of unknown or more than 1 year's duration, cardiovascular or late benign syphilis. Late (tertiary) syphilis or neurosyphilis treatments are discussed in reference 5.

+ Use discouraged in pregnancy

^ Probably effective; limited clinical experience

mal predominance of *Lactobacilli* by large numbers of *Gardnerella* and anaerobic bacteria.

Treatment

At the present time, screening of pregnant women for BV is not recommended, but symptomatic women should be treated (Table 4).⁵ Metronidazole is recommended for BV in nonpregnant women, but its safety has not been established in the first trimester of pregnancy. During the first trimester, local application of clindamycin cream is recommended. During the second and third trimester (after fetal organogenesis), metronidazole is widely used by many clinicians, for mutagenicity is unlikely. Treatment

with vaginal clindamycin cream or metronidazole gel are alternative regimens which may be preferable.

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Table 4 - Treatment of Bacterial Vaginosis in Pregnancy

Metronidazole 500 mg orally 2 times a day for 7 days or

Clindamycin cream, 2%, one applicator (5 grams) intravaginally at bedtime for 7 days (for first trimester treatment)

Alternative Regimens

Metronidazole 2 grams orally in a single dose

Metronidazole gel, 0.75%, one applicator (5 grams) intravaginally 2 times a day for 5 days

Clindamycin 300 mg orally 2 times a day for 7 days

Post Cesarean Section Death

J. Kelley Avery, M.D.*

Case Report

The patient was a 31-year-old mother of one who had an uneventful pregnancy except for some slight vaginal bleeding at 5 months gestation. The patient was observed in the labor and delivery area of the hospital, and the bleeding stopped spontaneously. No subsequent bleeding occurred. Her first baby was delivered by cesarean section and was known to be a normal child, now 5 years of age.

The patient came into the hospital at the expected time of delivery in early labor. She declined an opportunity to deliver vaginally and was taken to the operating room within two hours of her admission. It was Friday, and her regular attending obstetrician was not on call. His associate performed an uneventful cesarean section under epidural analgesia. The operative note did not describe any intraoperative problems. The development of the bladder flap was accomplished easily, and the uterus was entered through a low cervical incision. A healthy female infant was delivered with Apgar scores of 9/10. The remainder of the surgery proceeded without the slightest problem. The blood loss was estimated to be 500 cc.

The surgery was completed about 4:00 PM, and the patient went to the floor about two hours later. The nurse's note at 4:45 PM described a "soft abdomen with normal bowel sounds." The first night after the surgery the patient was medicated five times for abdominal pain.

The first day after the surgery, another one of the associates in the group made rounds on this patient. The patient was medicated five times for pain and one time for "gas." The blood counts that morning were normal, and the abdomen was said to be "soft" and the bowel sounds "hypoactive" by the nurses. The next day, Sunday, the same associate made rounds and ordered "Magnesium Citrate 1/2 bottle now." The patient had been able to walk very little because of pain. The doctor noted the abdomen to be "distended but soft." Bowel sounds were described as "occasional."

The following day, Monday, the patient's regular

attending physician returned and made rounds in the hospital. The nurse's notes during the night described the abdomen as "distended and firm" and the bowel sounds as "hypoactive." Again, "firm, distended, and tender" was the descriptive phrase used with reference to the abdomen. The patient had a small bowel movement during the night and "good results" in response to an enema at 8:00 AM. The attending physician discharged the patient, noting that the abdomen was "distended, soft, and the bowel sounds normal."

In the discharge summary, the attending physician recorded the abdominal pain and distention with the comment that these complaints had responded to "cathartics, colon tube, and enemas."

The patient was readmitted to the hospital the same night because of "severe abdominal pain and distention." After discussion with the attending physician, the emergency room physician began NG suction, started IV fluids, and ordered abdominal x-rays and a CBC/urine. The CBC was remarkable in that there were reported 33% segmented neutrophils and 46% band forms in the smear. The films of the abdomen showed "a massive amount of free air in the abdomen" which was deemed "consistent with the recent cesarean section." The suspected diagnosis was intestinal obstruction.

The following day at 9:00 AM the attending physician felt that the abdomen was "distended, tender but not tense." Through the day the patient's urinary output was very low, and she was thought to be dehydrated. IV fluids were increased. A CBC was ordered for the night and was to be repeated the following morning. X-rays of the abdomen were also to be repeated in the morning. On both CBCs the band forms were reported to be 70% and 60% respectively. Vital signs through the night continued to show tachycardia of 120 to 140. The x-rays of the abdomen again showed free air which seemed not to have changed from previous films. A CT scan of the abdomen reported, "the amount of free air is inordinate for the surgery done and a perforated hollow viscus is suspected."

The patient was returned to the operating room, where a perforation of the cecum was found, along with massive peritonitis. Cardiac arrest occurred during surgery. The patient was temporarily resuscitated,

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Company, Brentwood, Tennessee. This article appeared in the *Journal of the Tennessee Medical Association* in February 1994. It is reprinted here with the author's permission.

but arrest occurred again, and ultimately she died during the operation.

A lawsuit was filed, charging the attending physician and all his associates with negligence in the delay in diagnosing and treating the perforation of the colon. A negotiated settlement was the ultimate outcome of the lawsuit.

Loss Prevention Comments

The evaluation of abdominal distention in the post cesarean section patient is not an easy problem. Several factors could have contributed to the delay in diagnosis. The patient seemed to require an unusual amount of narcotics following her surgery. There was an apparent lack of continuity of care in that the patient was operated on by an associate, seen the first two days after surgery by another associate, and discharged from the hospital by the attending physician who had not seen her in the hospital.

The readmission was the critical piece in this puzzle. This patient's distention continued and worsened, as did her pain and tenderness. With different physicians seeing her almost daily, these very important findings were hard to evaluate. It is worth noting

that the attending physician did not come into the emergency room and examine his patient.

Certainly one would expect free air in the abdomen following a cesarean section on the fourth post-operative day, but "massive" free air? The unusually high percentage of band forms in the differential could have been due to intestinal obstruction, persistent acidosis, and dehydration, but it would not be expected to persist in the absence of infection. The "free air" did not change significantly in 48 hours as one would expect, and clinically the patient continued to deteriorate.

Would the results have been any different if the patient had been reoperated upon as an emergency on readmission? Or, if the possibility of bowel perforation had been entertained, would antibiotics have helped? What was the cause of the perforation in the first place? Certainly, in the absence of underlying bowel pathology, the first consideration would have to be bowel injury at the first operation. Every decision made in the management of this patient could be explained and defended. However, the above circumstances, taken as a whole, made settlement the best option.

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Greg St. John, M.D.**

J. David Talley, M.D.*

THROMBOLYTIC THERAPY IN PATIENTS WITH AN ABNORMALITY OF BLOOD COAGULATION

INTRODUCTION

Acute myocardial infarction (MI) is commonly due to a sudden occlusion of an epicardial coronary artery.¹ The use of thrombolytic therapy or balloon angioplasty to open the vessel has been shown to decrease mortality.^{2,3} Due to clinical and operational restraints, thrombolytic therapy is the preferred treatment in more than 90% of patients with an acute MI.⁴ Despite the widespread use of thrombolytic agents for acute MI since 1983, many areas of treatment uncertainty exist, including patients who have a preexisting abnormal coagulation cascade. We recently participated in the care of a patient with an acute MI who had previously received an oral anticoagulant and discussed pertinent points.

PATIENT PRESENTATION

The patient is a 47-year-old male who had undergone a three-vessel coronary artery bypass grafting procedure in 1990. In 1994, he presented with chest discomfort consistent with unstable angina pectoris. Cardiac catheterization revealed patent saphenous vein grafts to the left anterior descending and posterior descending branch of the right coronary arteries. The saphenous vein graft anastomosed to the third obtuse marginal of the circumflex coronary artery was severely

narrowed. Balloon angioplasty was performed to the vein graft. The procedure was repeated several weeks later for restenosis. Finally, an intravascular stainless steel stent (Gianturco-Roubin Flex-Stent[®], Cook Inc., Bloomington, IN) was placed inside the vein graft. The use of the stainless steel stent required the use of anticoagulation with warfarin sodium (Coumadin[®], DuPont Pharma, Wilmington, DE) for six weeks.

Six months later, he presented with prolonged chest pain and ST segment elevation in the inferior-lateral leads. He was no longer taking warfarin. The prothrombin time (PT) was 10.6 seconds, the international normalized ratio (INR) was 0.9, and the platelet count was 315,000 mm³. He was treated with tpa (Activase[®], Genentech, Inc., South San Francisco, CA). The peak creatine kinase was 243 U/L and the CK-MB was 48 ng/ml. The patient was managed medically, and the post-MI course was uneventful.

DISCUSSION

This patient represents several interesting points of discussion, including a review of the pharmacology of warfarin sodium, "new" anticoagulant regimens for intravascular stents, and finally the possible use of a thrombolytic agent in a patient with acute MI on oral anticoagulants.

Pharmacology of Warfarin. Warfarin is the most commonly prescribed oral anticoagulant because of its favorable pharmacodynamic profile. It reaches a peak plasma concentration in 90 minutes and has a half-life

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of 35 hours. Warfarin inhibits the activation of vitamin K-dependent clotting factors [factors II (prothrombin), VII, IX, and X, and proteins C and S]. The decrease in active clotting factors prolongs the PT. The anticoagulant affect of warfarin can be reversed by stopping treatment, administering vitamin K, or in life-threatening situations, replacing the vitamin K-dependent coagulation factors with fresh-frozen plasma.

There are multiple food and drug interactions with warfarin and thus its activity must be monitored closely.⁵ Activity has classically been measured with the PT that uses a thromboplastin as a test reagent. Since there are many thromboplastins used in PT testing, the relationship between a patient's PT checked at several different times or by differing laboratories is unknown. The INR was developed to correct for this variability. The INR is calculated from the patient's PT, a mean control PT, and the international sensitivity index according to the following formula:

$$INR = \left(\frac{\text{Patient's PT}}{\text{Mean Control PT}} \right)^{ISI}$$

INR = international normalized ratio, ISI = international sensitivity index, PT = prothrombin time⁶

"New" Anticoagulant Regiments for intravascular Stents. A reduction in intensive anticoagulation with the use of warfarin following placement of intracoronary stents may be traced to two independent developments, optimal stent expansion and the use of "new" anticoagulant regiments. With optimal deployment, using either visual over-sizing or adjunctive intravascular ultrasound, there is less need for intensive anticoagulation.⁷ Additionally, as observed by Colombo, the use of aspirin and ticlopidine has decreased the subacute thrombosis rate to less than 3%.⁸ It must be noted that ticlopidine is associated with a 1 to 2% bone marrow toxicity rate and, therefore, requires frequent checking of complete blood counts during therapy.

The Combination of Thrombolytic Therapy and Oral Anticoagulation. The patient was not taking warfarin at the time of the acute MI; however, considering the risks of giving thrombolytic therapy should the PT have been elevated, is worthwhile. Concurrent use of oral anticoagulants has been a classic exclusion criterion for patient enrollment in thrombolytic clinical trials. Due to the lack of clinical experience, no firm guidelines for thrombolytic use can be provided. It is generally assumed that there is an increased risk of bleeding with the use of anticoagulants. However, it is not known what the absolute risk is, or whether there is a range of risk related to the degree of anticoagulation or use of a particular thrombolytic agent.

In one retrospective study, there was a 5.7-fold

increase in the risk of intracranial bleeding in patients who were receiving oral anticoagulants and given thrombolytic therapy for acute MI. Patients in this study received streptokinase (n=1791), tpa (n=283), anistreplase (n=201) or urokinase (n=194).⁹

CONCLUSION

With the scant literature available, it appears that the prior use of oral anticoagulation is a strong contraindication to the use of thrombolytic therapy. Nonetheless, the risks of bleeding need to be weighed against the anticipated benefits of treatment. For patients at profound risk from an acute MI and who are receiving oral anticoagulants with an INR < 2, without evidence of an ongoing bleeding diathesis, thrombolytic therapy may be given with great caution. It must be fully understood by the treating physician, patient, and family that there may be an increase risk of bleeding. Patients with an INR > 2 should not receive thrombolytic therapy and if appropriate, be transferred to a hospital with a cardiac catheterization laboratory for balloon angioplasty.

FOOTNOTES

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State Health Watch

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TICKBORNE DISEASES IN ARKANSAS

During the summer months, ticks become active and look for a host animal for the purpose of obtaining a blood meal. The major ticks of concern in Arkansas are the Lone Star Tick, the American Dog Tick, the Deer Tick and the Brown Dog Tick which is less of a disease threat to man because it usually stays on canines. These are all host ticks which means that they attach to a host animal and take a blood meal before molting to the next stage. Gravid female ticks deposit several thousand eggs which hatch into larvae or seed ticks, molt to the nymph stage and then to the adult tick. The larval tick is distinguished by having three legs on each side while the nymphs and adult ticks have 4 legs per side. This whole process may take up to 3 years and involve several hosts.

After being in a brushy, woodland habitat where ticks are most likely to be found, a person should examine his/her body for ticks. Ticks should be removed as soon as possible by grasping them between the thumb and index finger and gently pulling straight out. Before disease transmission can occur, the tick usually must be attached for four hours or longer. Therefore, prompt removal is important.

All developmental stages of ticks (larvae, nymphs & adults) are infectious for most tickborne diseases, the exception being larval ticks which are incapable of transmitting Lyme disease.

Fortunately, most ticks do not carry disease organisms. Probably not more than 1.5% of the ticks carry Rocky Mountain Spotted Fever. No data are available on the percentage of ticks that carry other diseases.

Most of the time when a person has a tick bite there will be some itching and redness about the size of a quarter around the bite. This is a reaction to the venom of the tick and does not indicate disease transmission.

Rocky Mountain Spotted Fever

Arkansas physicians reported 18 cases of Rocky Mountain Spotted Fever (RMSF) in 1994, one of which was fatal. As in previous years, the majority of cases occurred during the height of summer when ticks were most active and people spent more time outdoors. However, cases occurred from February to September. Patients ranged in age from 2 to 93 years. Seventy eight percent (78%) were male.

The causative organism (*Rickettsia rickettsii*) is thought to be present in about 1.5% of the Lone Star Tick (*Amblyomma americanum*), the American Dog Tick (*Dermacentor variabilis*), and the Brown Dog Tick (*Rhipicephalus sanguineus*).

Headache, fever and a rash are the predominant symptoms of RMSF. The fever is usually of sudden onset and may be accompanied by deep muscle pain, malaise and chills. In about half of the cases, a rash appears about the third day. The rash usually starts on the wrists and ankles and spreads to the trunk, palms and soles. The lesions are initially erythematous and macular, 2-4 millimeters in diameter and blanch on pressure. Later, they may become maculopapular, petechial, hemorrhagic and darkened.

A four-fold rise in antibody titer between acute and convalescent sera to the Spotted Fever Group Antigen by complement fixation (CF) or indirect fluorescent antibody (IFA) or a single result of 1:16 by CF or 1:64 by IFA is diagnostic in the presence of compatible symptoms. The rickettsia may be identified by fluorescent antibody testing performed on liver, spleen or lung tissue removed at autopsy. Such tissues should be frozen and the ADH Division of Epidemiology notified if these tests are needed.

The Weil-Felix test, using Proteus bacterial antigens, is no longer appropriate as a routine test for patients with a fever of unknown origin.

Tetracyclines or chloramphenicol (the latter is preferred for children under 8 and pregnant women) should be administered in daily oral doses until the patient is afebrile (usually 3 days) and for 1-2 additional days. Because of the delay in development of a positive antibody titer, treatment should be instituted on the basis of clinical impression without waiting for laboratory confirmation. Delayed treatment and the use of improper antibiotics are primary reasons for RMSF mortality.

Rocky Mountain Spotted Fever
Arkansas and U.S.
1990-1994

Year	U.S. Cases	U.S. Rate	AR Cases	AR Rate	AR Deaths
1990	646	0.27	23	1.01	1
1991	628	0.26	36	1.46	3
1992	489	0.19	24	1.00	1
1993	450	0.18	17	0.71	1
1994	432	0.17	18	0.80	1

Rates given as cases per 100,000 population

Tularemia (Rabbit Fever)

Tularemia is the most common tickborne disease in Arkansas with 23 cases reported in 1994. This accounted for 29% of the 85 cases reported nationwide. Arkansas' patients ranged in age from 1 month to 86 years. Fifteen of these patients were male. No cases were fatal.

The causative organism, (*Francisella tularensis*), a small gram-negative coccobacillus, may be transmitted to man in a variety of ways. In Arkansas, tickborne infection accounts for approximately 75% of cases. The disease may also be transmitted by deer flies or other insects; by ingestion of contaminated water or undercooked, diseased meat; by inhaling infected dust or aerosols; and by contamination of the skin or mucous membranes of the mouth or eyes with body fluids while dressing diseased rabbits or other animals. Animal bites have rarely been responsible for transmitting tularemia. Despite the fact that the organism is highly infectious, person to person transmission is rare.

Symptoms appear after an incubation period of 2-10 days. Headaches, chills, fever, malaise, fatigue and gastrointestinal symptoms are commonly reported. Other symptoms may occur, depending on the method and form of the disease.

a. The ulceroglandular form is characterized by a skin ulcer and regional lymphadenopathy. Transmission is by an infected tick or insect bite and less frequently by skin contamination with body fluids of infected animals.

b. The typhoidal form may develop from any type of transmission and is characterized by fever and systemic illness, usually without lymphadenopathy.

c. The pleuropulmonary form may result from inhalation of infected aerosols or as a complication of other forms such as the typhoidal or ulceroglandular form. Lung lesions are usually observed on radiographs.

d. The oropharyngeal form usually results from ingestion or inhalation of the organism, causing an acute exudative or membranous pharyngotonsillitis with cervical lymphadenopathy.

e. The oculoglandular form results from getting infected material in the eyes, usually while dressing infected game animals.

Diagnosis is based on a combination of clinical symptoms and laboratory test results. A fourfold rise in serum antibodies between acute and convalescent specimens is confirmatory, as is a single convalescent titer of 1:160 in a patient with compatible symptoms.

Streptomycin is the drug of choice for tularemia treatment. Gentamycin and tobramycin have been reported to be effective; the tetracyclines and chloramphenicol are effective when given until the temperature is normal for at least 4 days, but relapses may be more common than with streptomycin therapy. Fully virulent streptomycin resistant organisms have been described.

Lyme Disease

In 1994, fifteen (15) cases of Lyme disease were reported in Arkansas of 11,144 total U.S. cases. The reported age of patients ranged from 3 to 75 years. Six (6) females and nine (9) males were reported.

Lyme disease is a mandatorily reportable disease in Arkansas, but is still relatively rare in the state. The majority of cases are found in the northeastern U.S., Minnesota and Wisconsin. The disease is found only sporadically in the southeastern U.S.

Studies are underway to detect which species of ticks may carry the causative spirochete (*Borrelia burgdorferi*) in Arkansas. Several neighboring states have identified the borrelia in the Lone Star Tick and the American Dog Tick, both of which are common in Arkansas.

Lyme disease is a systemic, tickborne disease with protean manifestations, including dermatologic, rheumatologic, neurologic and cardiac abnormalities. The best clinical marker for the disease is the initial skin lesion, erythema migrans (EM), that occurs in 60% to 80% of patients. The lesion typically begins as a red macule or papule and expands over a period of days or weeks to form a large round lesion, often with partial central clearing. A solitary lesion must reach at least 5 cm. (2.5 in.) in diameter. Annular erythematous lesions occurring within several hours of a tick bite represent

Ticks removed from a patient suspected to have Lyme disease may be sent to the ADH Epidemiology Division to test for borrelia. Live ticks should be placed in a sealed jar or tube which is half full of grass or clover.

hypersensitivity reactions and do not qualify as EM. In most patients, the expanding EM lesion is accompanied by other acute symptoms, particularly fatigue, fever, headache, mild stiff neck, arthralgias or myalgias. These symptoms are typically intermittent. The diagnosis of EM must be made by a physician. Laboratory confirmation is recommended for persons who have no known exposure to an endemic area. The disease is difficult to diagnose with certainty as blood tests are often inaccurate, and symptoms may resemble other diseases. Research is in progress to develop a reliable laboratory test for Lyme disease based on antigenic components or antigen-antibody complexes. The Arkansas Department of Health (ADH) will provide testing when methods with high degrees of sensitivity and specificity are developed.

In general terms, a case of Lyme disease is defined as follows:

1. A person with erythema migrans; or
2. A person with at least one late manifestation and laboratory confirmation of infection.

It should be emphasized that this is an epidemiologic case definition intended for surveillance purposes only.

Lyme Disease Diagnosis - CDC Assistance

Ticks removed from a patient suspected to have Lyme disease may be sent to the ADH Epidemiology Division to test for borrelia. Live ticks should be placed in a sealed jar or tube which is half full of grass or clover. Identification will be made at the CDC's Arboviral Disease Laboratory at Fort Collins, Colorado.

The CDC's Division of Vector-Borne Viral Diseases

The spectrum of disease ranges from an illness so mild that no medical care is sought to a severe, life threatening or fatal disease. The most common symptoms are fever, headaches, anorexia, nausea, vomiting and myalgia.

(DVBVD) at Fort Collins, Colorado, has agreed to perform reference testing of blood samples which may be sent to the ADH for referral to the CDC DVBVD. Biopsy material for diagnostic culture for *Borrelia burgdorferi* may also be submitted following prior arrangement. To arrange for the submission of samples, phone the ADH Epidemiology Division at 661-2594.

Ehrlichiosis

Human Ehrlichiosis in the U.S. is a newly recognized disease of man. The first diagnosed case occurred in 1986 in a person from Gurdon, Arkansas who sustained a tick bite while planting trees.

The spectrum of disease ranges from an illness so mild that no medical care is sought to a severe, life threatening or fatal disease. The most common symptoms are fever, headaches, anorexia, nausea, vomiting and myalgia. The disease has been called spotless Rocky Mountain Spotted Fever because a rash is seldom present.

Laboratory findings include leucopenia, thrombocytopenia and elevation of one or more liver function tests.

Diagnosis is based on clinical and laboratory findings

and the development of the antibody to *Ehrlichia chaffeensis*, the main causative organism of human Ehrlichiosis. A confirmed diagnosis can be made by demonstrating a fourfold rise between acute and convalescent sera using the Indirect Fluorescent Antibody test. A single titer of 1:64 with compatible symptoms results in a probable diagnosis. On rare occasions, morulae or inclusions may be seen in leucocytes and monocytes.

Recently, a few cases of Human Granulocytic Ehrlichiosis have been diagnosed in the upper Midwest. The causative strains isolated were *Ehrlichia ewingii* or *equi*. The morulae or inclusion bodies were found in neutrophils.

The reservoir is not known, but many cases of Ehrlichiosis are diagnosed each year in dogs. The Arkansas Livestock and Poultry Commission has reported positive results in 117 serum samples from dogs in 1994. There has not been a correlation, however, between animal and human cases.

The disease has an incubation period of 1 to 3 weeks after a tick exposure. Most often the transmitting tick is the Lone Star Tick (*Amblyomma americanum*).

To date, there have been over 400 human cases reported in the U.S., with 34 from Arkansas. There have been at least 9 deaths from *E. chaffeensis* and 2 or 3 from other strains of Ehrlichia. Because the disease may closely resemble RMSF, physicians are encouraged to submit serum samples to the Arkansas Department of Health laboratory for testing especially in instances where test results are negative for RMSF. Acute and convalescent sera should be submitted, but single samples will be accepted. The tests will be run at the CDC laboratory.

Specific treatment for Ehrlichiosis is tetracycline in the same dose and schedule as for RMSF. Chloramphenicol is recommended for children under 8 years of age and pregnant women. Doxycycline, 100 mg BID until the patient is afebrile for 3 days, has been found to be effective.

HIV Survey in Childbearing Women Suspended

States participating in the HIV Survey in Childbearing Women were notified Friday (5/12/95) of the decision made the day before by the Assistant Secretary of Health, Dr. Phil Lee, to suspend the survey. Dr. Lee also asked the Centers for Disease Control and Prevention (CDC) to publicly announce the decision that same day during a congressional hearing in Washington D.C. on Counseling and Testing Policy for Pregnant Women.

For the purposes of implementing Dr. Lee's decision, the CDC notified state project directors that it will no longer

support the ELISA testing of specimens collected for the survey. However, areas were told to continue all survey steps up to the point of ELISA testing. Support for the costs associated with the collection of the specimens and other administrative costs will not be affected by this decision at the present time.

The suspension will be in effect until the Public Health Service has completed a consultative process with the States, CDC Advisory Committee of Prevention of HIV Infection and interested parties.

Reported Cases of Selected Reportable Diseases in Arkansas

Profile for April 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases April 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	10	40	28	33	187	130
Giardiasis	5	34	29	35	126	150
Shigellosis	7	35	46	30	193	201
Salmonellosis	16	46	56	63	534	402
Hepatitis A	16	80	34	27	253	74
Hepatitis B	2	20	16	38	60	90
HIB	0	3	2	7	6	8
Meningococcal Infections	5	18	26	17	55	27
Viral Meningitis	1	3	9	12	62	79
Lyme Disease	0	2	5	3	15	8
Rocky Mountain Spotted Fever	6	7	3	1	18	17
Tularemia	1	2	6	8	23	36
Measles	0	2	1	0	5	0
Mumps	1	3	3	5	7	10
Rubella	0	0	0	0	0	0
Legionellosis	0	0	4	1	16	6
Pertussis	1	6	17	5	33	17
Tuberculosis	33	74	63	56	264	209



Arkansas HIV/AIDS Report

1983-1995

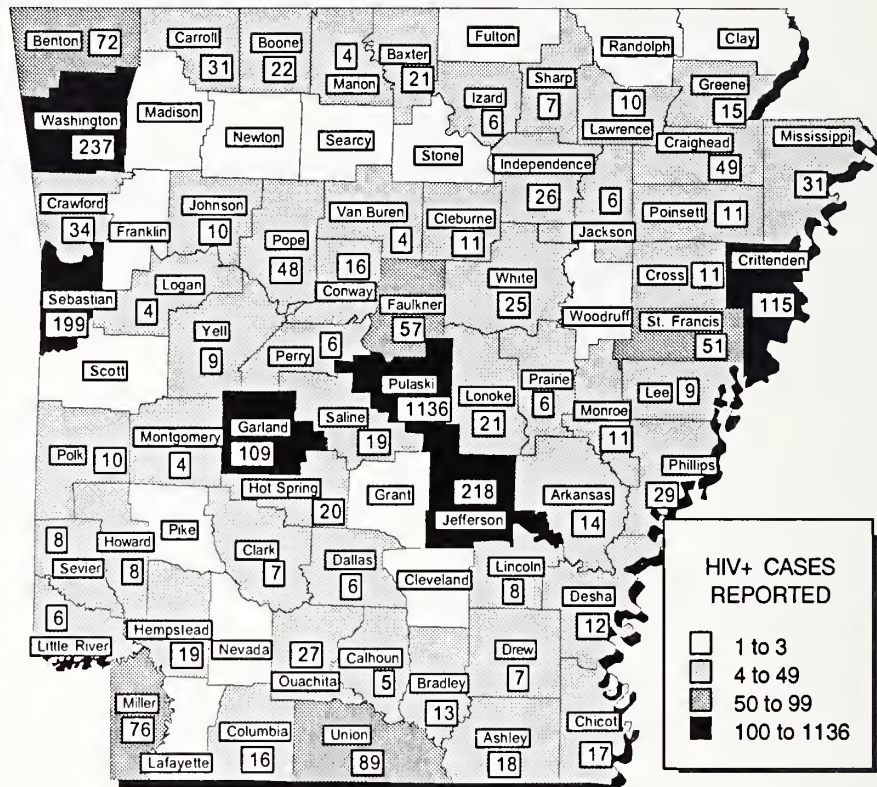
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.

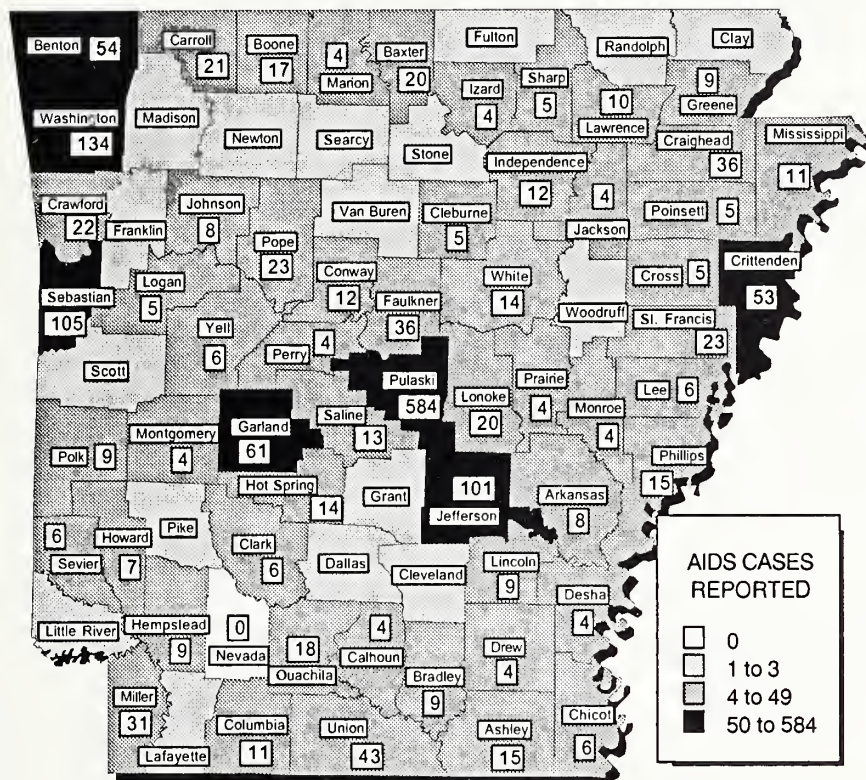


HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	138	2,625	83
	Female	8	26	37	68	85	81	94	90	49	538	17
AGE	<5	1	1	2	8	13	6	3	7	1	42	1
	5-12	0	1	1	5	1	2	1	0	0	11	0
	13-19	0	7	8	14	19	25	11	22	4	110	4
	20-29	33	110	123	183	149	156	175	145	60	1,134	36
	30-39	44	86	104	196	208	179	168	171	74	1,230	39
	40-49	22	25	35	56	70	67	65	77	27	444	14
RACE	>49	8	6	11	17	22	38	23	35	21	181	6
	White	87	170	174	328	298	291	277	258	119	2,002	63
	Black	21	69	106	151	184	173	163	183	64	1,114	35
	Other/Unknown	0	2	5	2	3	9	6	16	4	47	2
RISK	Male/Male Sex	64	137	139	243	245	260	240	226	45	1,600	51
	Injection Drug User (IDU)	13	30	48	73	96	75	64	71	18	488	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	7	218	7
	Heterosexual	5	25	26	60	65	68	101	87	20	456	14
	Transfusion	5	5	4	6	8	10	0	1	1	40	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	2	42	1
	Undetermined	1	20	36	41	23	12	9	39	94	275	9
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	187	3,163	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995



AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.

Of the 3,163 Arkansans reported to be HIV+, 1,731 have been diagnosed with AIDS. (5/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	91	1,508	87
	Female	5	6	10	20	25	35	64	42	16	223	13
AGE	<5	0	1	1	6	6	3	2	1	1	21	1
	5-12	0	1	0	1	1	0	1	0	0	4	0
	13-19	0	0	0	4	3	2	4	3	0	16	1
	20-29	31	27	24	55	57	81	110	67	21	473	27
	30-39	39	36	41	78	80	128	178	133	47	760	44
	40-49	15	10	7	35	41	52	78	61	23	322	19
	>49	5	8	7	11	13	19	27	30	15	135	8
RACE	White	74	61	58	141	134	206	275	190	68	1,207	70
	Black	16	20	21	47	66	75	121	102	38	506	29
	Other/Unknown	0	2	1	2	1	4	4	3	1	18	1
RISK	Male/Male Sex	55	59	50	122	120	182	237	162	54	1,041	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	16	251	15
	Male/Male Sex & IDU	16	6	6	18	17	21	26	23	3	136	8
	Heterosexual	5	3	7	11	12	24	52	40	9	163	9
	Transfusion	2	7	3	7	11	3	2	4	1	40	2
	Perinatal	0	1	1	6	6	3	3	1	1	22	1
	Hemophiliac	0	1	1	5	5	4	5	6	2	29	2
	Undetermined	0	2	1	3	1	3	5	13	21	49	3
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	107	1,731	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

CONWAY

Wood, Michael David, Obstetrics/Gynecology. Medical Education, UAMS, 1987. Internship/Residency, William Beaumont Army Medical Center, 1988/1991. Board certified.

EL DORADO

Tolosa, Elizabeth Callejo, Pediatrics. Medical Education, Manila Central University, Philippines, 1971. Internship/Residency, 1983/1986. Board eligible.

FAYETTEVILLE

Billingsley, John A., III, Ophthalmology. Medical Education, University of Missouri School of Medicine, Kansas City, 1991. Internship, Truman Medical Center, Kansas City, 1992. Residency, University of Oklahoma, Department of Ophthalmology, Dean A. McGee Eye Institute, Oklahoma City, 1995.

GREENWOOD

Schmitz, James, Family Practice. Medical Education, College of Osteopathic Medicine of Oklahoma State University, Tulsa, 1992. Internship/Residency, AHEC/Jefferson Regional Medical Center, 1993/1995.

JONESBORO

Berry, Michael, General Surgery. Medical Education, UAMS, 1990. Internship/Residency, Texas A&M University, Scott & White Memorial Hospital, 1991/1995.

LITTLE ROCK

Bratton, Nita Gail, Cardiology. Medical Education, Louisiana State University, Shreveport, 1987. Internship/Residency, Louisiana State University, Shreveport, 1988/1990. Board certified.

Meyer, Lawrence Howard, Family Practice. Medical Education, UAMS, 1989. Internship, transitional, 1990. Residency, 1995. Board pending.

Miller, Laurence Howard, Psychiatry. Medical Education, Chicago Medical School, Chicago, Illinois, 1970. Internship/Rhode Island Hospital, 1971. Residency, University Hospital - Boston University Medical Center, 1974. Board certified.

Suasin, Winlove Bonpua, Radiation Oncology. Medical Education, Creighton University, 1990. Internship, San Joaquin County Hospital, Stockton, 1991. Residency, St. Marys Hospital, San Francisco, 1993 and Fox Chase Cancer Center, Philadelphia, 1994. Board eligible.

Westbrook, September Ann, Pediatrics. Medical Education, UAMS, 1991. Internship, UAMS, 1992. Residency, UAMS - Arkansas Children's Hospital, 1994.

VAN BUREN

Osofisan, Olaniyi Olabode, Cardiology. Medical Education, University of Michigan, Ann Arbor, Michigan, 1987. Internship/Residency, Henry Ford Hospital, 1988/1990.

RESIDENTS

Allgood, John W., Jr., Radiation Oncology. Medical Education, UAMS, 1995. Internship, UAMS, 1996.

Barrett, Rebecca Lynn, Family Medicine. Medical Education, UAMS, 1995. Internship, AHEC-NW.

Bauknight, Nichole Michelle, Psychiatry. Medical Education, UAMS, 1995. Internship/Residency, UAMS, 1996/1999.

Baxter, William K., Family Practice and Internal Medicine. Medical Education, UAMS, 1995. Internship/Residency, Eastern Virginia Medical School, Norfolk, Virginia, 1999.

Bonner, Steven Hunter, Psychiatry. Medical Education, UAMS, 1995. Residency, UAMS.

Brandt, Jason Coffman, Orthopedic Surgery. Medical Education, UAMS, 1995. Internship, Methodist Hospital Systems, Memphis, Tennessee, 1996. Residency, University of Tennessee, Campbell Clinic, 2000.

Brashears, Clay B., Medicine/Pediatrics. Medical Education, UAMS, 1995. Internship/Residency, UAMS.

Brewer, Jonathan Keith, Family Practice. Medical Education, University of Oklahoma College of Medicine, Oklahoma City, 1995. Residency, AHEC-Fort Smith, 1998.

Buckner, Amy Boast. Medical Education, UAMS, 1995.

Burr, William Ethridge, Jr., Ophthalmology. Medical Education, Baylor College of Medicine, Houston, Texas, 1995. Internship/Residency, UAMS.

Ceola, Wade Matthew. Medical Education, UAMS, 1995.

Conway, Warren Lee, Transitional. Medical Education, Texas A&M Health Science Center, College Station/Temple, TX. Internship, UAMS.

Diamond, Corey Lynn, Internal Medicine. Medical Education, UAMS, 1995. Residency, UAMS, 1998.

Erwin, John Scott. Medical Education, UAMS, 1995.

Ferrell, Amanda J., Medicine. Medical Education, UAMS, 1995. Internship, UAMS, 1998.

Farst, Karen J., Medicine/Pediatrics. Medical Education, Texas Tech Health Sciences Center, 1995. Internship, UAMS, 1999.

Ferguson, Scott Frazier, Transitional. Medical Education, UAMS, 1995. Internship, UAMS, 1996.

Ferguson, Susan Portis, Family Practice. Medical Education, UAMS, 1995. Residency, AHEC-Northwest, 1998.

Fink, Roger Lee, II, Pathology. Medical Education, University of Missouri, Columbia, 1991. Residency, UAMS, 1996.

Fischer, Michael Christian, Internal Medicine. Medical Education, UAMS, 1995. Residency, UAMS, 1998.

Flippin, Dane Howard, Family Medicine. Medical Education, UAMS, 1995. Residency, AHEC-Jonesboro, 1998.

Gati, Kenneth Gregory, Transitional/Orthopedics. Medical Education, Louisiana State University School of Medicine, Shreveport, 1995. Internship, UAMS.

Goodson, Timothy C., Urology. Medical Education, UAMS, 1995. Internship, UAMS.

Hays, Debbie Ann, General Surgery. Medical Education, UAMS, 1995. Residency, UAMS.

Hodge, Keith Ray, General Surgery. Medical Education, University of Texas Health Science Center, San Antonio, 1995. Internship, UAMS, 1996.

Kempson, Steven Eugene, Family Practice. Medical Education, UAMS, 1995. Internship, UAMS, AHEC-SW.

Knutson, David Lowell, II, Dermatology. Medical Education, University of Iowa College of Medicine, Iowa City, 1995. Internship/Residency, UAMS, 1999.

Ledbetter, Johnny Roger, Jr., Pediatrics. Medical Education, UAMS, 1995. Residency, UAMS, 1998.

Lemieux, John Geoffrey, Diagnostic Radiology.

Medical Education, Louisiana State University Medical Center, Shreveport, 1995. Residency, UAMS.

Lewandowski, Raymond Casimir, III, Family Practice. Medical Education, University of Texas Southwestern Medical School, Dallas, 1995. Internship, AHEC-Fort Smith.

Lu, Eugene, Pediatrics. Medical Education, UAMS, 1995. Internship, UAMS, 1996.

Massey, Deborah Ann, Pediatrics. Medical Education, University of Louisville, Louisville, Kentucky, 1995. Residency, UAMS, 1998.

Mhoon, John Mark, Urology. Medical Education, UAMS, 1995. Residency, UAMS, 2001.

Moody, Melody Lynne, Pediatrics. Medical Education, UAMS, 1995. Internship/Residency, UAMS 1998.

Rose, Steve, Family Practice. Medical Education, UAMS, 1995.

Sanders, Scott Mitchell, Pediatrics. Medical Education, UAMS, 1995. Residency, Arkansas Children's Hospital, 1998.

Simpson, Laura Katherine, Pediatrics. Medical Education, UAMS, 1995. Internship, Arkansas Children's Hospital.

White, Bradley Allen, Dermatology. Medical Education, UAMS, 1995. Residency, UAMS, 1999.

Woodard, Eric A., Internal Medicine. Medical Education, UAMS, 1995. Internship, UAMS.

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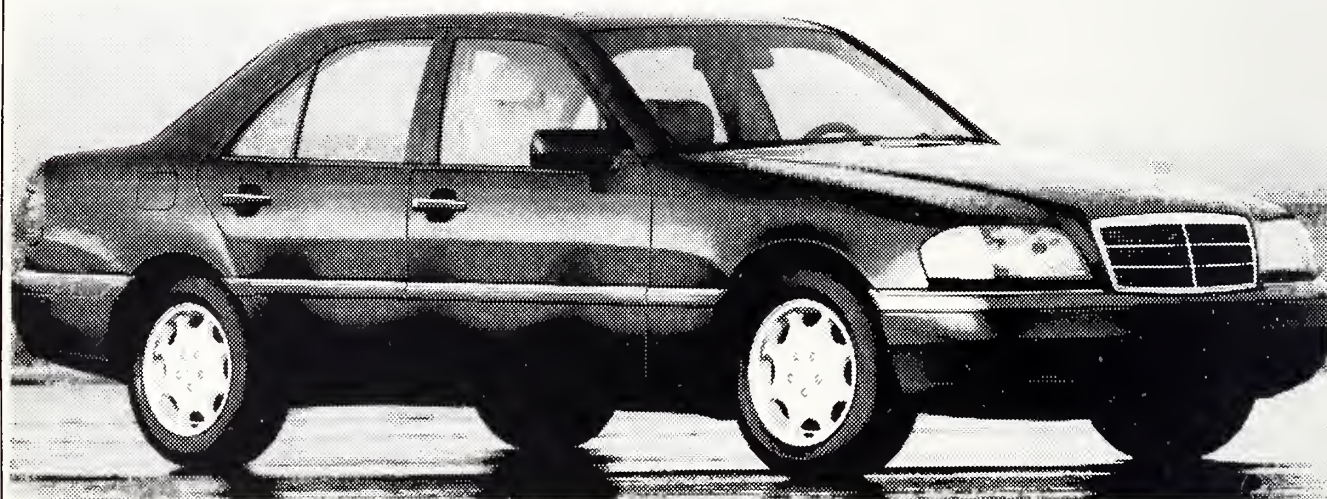
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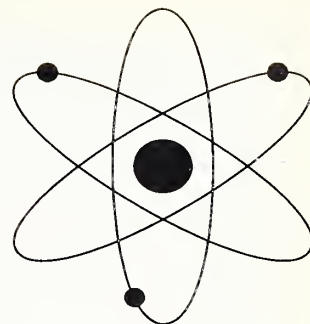
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Radiological Case of the Month



David L. Harshfield, M.D.
Kelly G. Grigg, B.S.

History:

This patient presented with a history of prior motor vehicle accident with subsequent development of neck pain. A cervical spine series was performed immediately after the motor vehicle accident (Figure 1) and a subsequent cervical spine series was performed four years later for persistent neck pain (Figure 2).



Figure 1

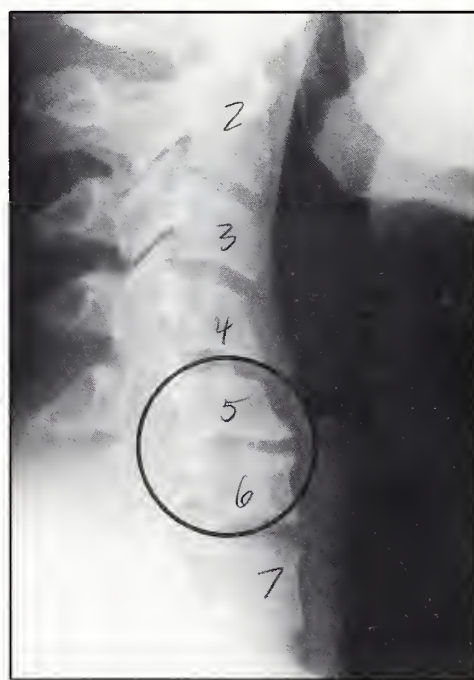


Figure 2

Findings:

The cervical spine films seen in Figure 1 were taken immediately after the trauma. There was evidence of loss of the normal lordotic curvature of the cervical spine with apex of this altered curvature at the level of C5-C6 disc space. This lateral cervical spine film was interpreted as "straightening consistent with muscle spasm, but no evidence of acute fracture or dislocation."

The cervical spine lateral view seen in Figure 2 was taken four years later because of continued severe neck pain. Notice that the patient has developed a permanent loss of the normal cervical lordotic curvature with interval development of degenerative change of the C5-C6 disc space. This is evidenced by loss of disc space height accompanied by cervical endplate and uncinat spur formation.

Post-traumatic degenerative change of the cervical spine

Discussion:

Keys to diagnosing cervical fractures and other skeletal abnormalities related to trauma have been discussed previously in this monthly series (see case report on Perched Facets on page 403 in Volume 90, Number 8 of *The Journal*).

The identification of soft tissue injuries of the neck associated with automobile accidents is also an extremely important and frequently litigious task for those of us who interpret cervical spine films. Clinical findings in patients with soft tissue injuries of the neck have been of little help to clinicians who must attempt to determine prognosis and therapy in patients having undergone whiplash injuries.

Alterations of the so-called normal cervical lordosis have been the subject of much speculation and a number of studies. Researchers have found that the lower cervical spine sustains the greatest amount of damage in these acceleration-deceleration injuries. Acceleration of the head relative to the body results in the application of excessive torque and shear to the structures of the neck and thus produce damage both through compression and distraction of soft tissues.

Clinical, animal, cadaver, and post-mortem studies have demonstrated that the cervical zygapophyseal joints, intervertebral discs, muscles, and ligaments can be seriously injured through these forces without necessarily producing clinical or radiographic signs.

The majority of victims, who improve spontaneously over the first few months after injury, have probably sustained minor injury to the muscles and ligaments. A significant proportion, however, will have chronic and unremitting symptoms that reflect serious damage to such structures as the zygapophyseal joints or intervertebral discs. These patients are likely to be older, to have more severe pain immediately after the injury, and to have injury related cognitive impairment.

The patient depicted in this case report had an initial radiographic study demonstrating "simple" straightening of the cervical spine on lateral view with all other views being within normal limits. Often times this finding is dismissed as being due to muscle spasm or patient positioning. Not much emphasis has been placed on its presence being a potential indicator of subsequent post-traumatic degenerative changes.

A review of the literature indicates that there is a wide range of normal in regard to cervical spine curvature with many factors, both traumatic and non-traumatic in nature producing this great variation. There is evidence, however, in the literature that supports the contention that an altered cervical curvature is of prognostic significance.

Compared with "normal" patients there is a significantly higher incidence of degenerative changes in individuals who have a sharp reversal of the normal cervical curve. The presence of deeply lordotic, shallow lordotic and even absent cervical curves may be normal variations. A sharp reversal of the curve after injury is a harbinger of degenerative changes in 60% of the patients.

Incidentally, it is well known that intervertebral disc degeneration often occurs without clinical symptoms until late in the course of the process. This degeneration most commonly develops between the fifth and sixth cervical vertebra with much less involvement at adjacent levels. These degenerative changes usually occur at only one cervical level, but can occasionally can be seen in two or three levels.

The sharp reversal of the cervical curve generally occurs at the intervertebral level between the fourth and fifth cervical or the fifth and sixth cervical vertebra. Degenerative changes develop either at the level of where reversal occurred or at a more distal level.

Patients who have early flexion and extension x-rays showing restricted motion at one intervertebral level tend to have a poor symptomatic recovery and considerably increased incidence of degenerative changes at that level. Knowledge of the normal curve of the cervical spine and the variations and potential clinical implications are important when interpreting radiographs of the cervical spine. When patients have significant curvature alterations, rather than subjecting them to minimal medical management (skillful neglect) they should undergo early treatment with manipulative mobilization and appropriate physical therapy to ensure a favorable long term outcome.

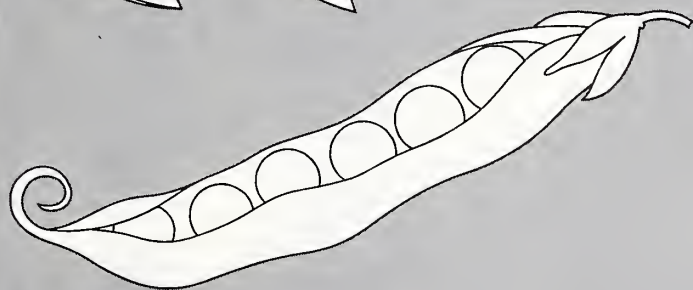
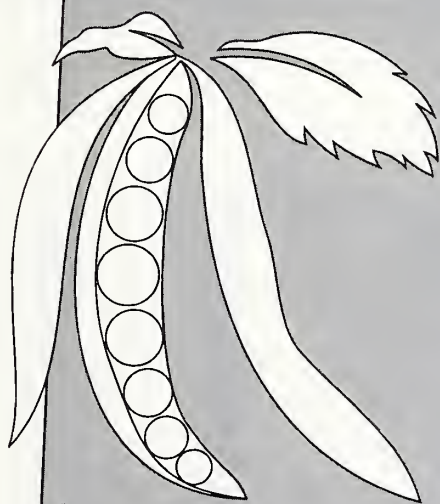
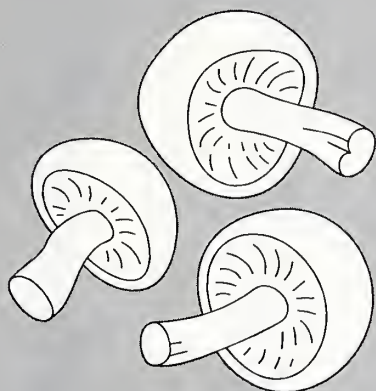
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Davis, A.G.; Injuries of the Cervical Spine. *J. Am. Med. Assn.*, 127: 149-156, 1945.

Editor: David Harshfield, M.D. is Director of Radiology at Riverside Radiology Group in North Little Rock & Clinical Associate Professor of Radiology at UAMS.

Contributor: Kelly Grigg is a premedical student research assistant at UAMS.

Help Your Heart **Recipes**



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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Vegetable Soup

- | | | | |
|---|--|---|--------------------------------------|
| 2 | cups peeled, diced potatoes | 1 | teaspoon thyme |
| 1 | cup diced carrots | ¼ | teaspoon freshly ground black pepper |
| 1 | cup diced celery | 6 | cups low-sodium beef broth |
| 1 | cup chopped onion | ⅓ | cup finely chopped fresh parsley |
| 3 | cups shredded cabbage | | |
| 1 | 6-ounce can no-salt-added tomato paste | | |

Combine all ingredients except parsley in a large stockpot. Bring to boil, reduce heat and simmer 20 minutes, or until vegetables are tender. Remove 3 cups vegetables and broth and purée in blender or the work bowl of a food processor fitted with a metal blade. Return purée to pot, add parsley and reheat. Serve hot. Serves 9; 1 cup per serving.

Note. You may wish to substitute equal amounts of similar types of vegetables for variety: 1 cup green beans, 1 cup peas, etc.

Nutrient Analysis per Serving

77 kcal	Calories	0 mg	Cholesterol	0 gm	Saturated Fat
4 gm	Protein	72 mg	Sodium	0 gm	Polyunsaturated Fat
15 gm	Carbohydrate	1 gm	Total Fat	0 gm	Monounsaturated Fat

This Help Your Heart Recipe is from the *American Heart Association Cookbook, Fifth Edition*, American Heart Association. Published by Times Books, a Division of Random House, Inc. 1973, 1975, 1979, 1984, 1991.

Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Broccoli and Cheese Omelette

- | | | | |
|---|-------------------------------------|---|---------------------------------------|
| 2 | Vegetable oil spray | | Dash white pepper |
| | teaspoons acceptable margarine* | ¼ | cup chopped cooked broccoli |
| | Egg substitute equivalent to 2 eggs | ½ | ounce shredded low-fat cheddar cheese |
| | Pinch salt | | |

Lightly spray a small nonstick skillet with vegetable oil spray. Add margarine and place over medium-high heat.

In a small bowl, combine remaining ingredients. Beat and pour mixture into pan. With one hand, move pan back and forth. With the other, stir eggs in a circular motion with a fork. Do not scrape bottom of pan.

When omelette is almost cooked, add the broccoli and cheese. Fold omelette over with fork while holding pan at a 45° angle. Roll omelette onto plate to serve. Serves 1

*Select margarine with liquid oil as the first ingredient and no more than 2 gm of saturated fat per tablespoon.

Nutrient Analysis per Serving

162 kcal	Calories	3 mg	Cholesterol	3 gm	Saturated Fat
16 gm	Protein	431 mg	Sodium	2 gm	Polyunsaturated Fat
5 gm	Carbohydrate	9 gm	Total Fat	4 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Spiced Peaches

- | | | | |
|-----|-----------------------|---|--|
| 1/2 | cup cider vinegar | 8 | peach halves, canned in natural juices, no sugar added |
| 1/4 | cup sugar | | |
| 1 | stick cinnamon | | |
| 1 | teaspoon whole cloves | | |

Drain juice from peaches, reserving fruit and 1 cup of juice.

In a saucepan, combine vinegar, sugar, cinnamon, cloves and 1 cup juice reserved from peaches.

Place pan over medium-high heat and bring to a boil. Boil until liquid is reduced by about half. Remove spices from mixture, reserving cloves. Set liquid aside.

Stick cloves into peach halves and pour prepared liquid over peaches. Cover and refrigerate overnight.

Serve with low-fat baked ham or as part of a fruit salad.

Serves 8

Nutrient Analysis per Serving

51 kcal	Calories	0 mg	Cholesterol	0 gm	Saturated Fat
0 gm	Protein	0 mg	Sodium	0 gm	Polyunsaturated Fat
13 gm	Carbohydrate	0 gm	Total Fat	0 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Roast Chicken

- | | | | |
|-----|---|-----|-------------------------------------|
| 1/4 | cup white wine | 1/2 | teaspoon basil or tarragon |
| 1/2 | cup low-sodium chicken broth | 1 | tablespoon acceptable vegetable oil |
| 1 | 4-pound roasting chicken | | |
| 1/2 | teaspoon freshly ground black pepper, or to taste | | |

Preheat oven to 350°F.

In a small bowl, combine wine and broth. Set aside.

Remove giblets and neck from chicken and save for other use, or discard. Rinse chicken and pat dry. Rub inside and out with pepper and basil or tarragon. Rub oil over skin and truss chicken. Place on a rack in a roasting pan, breast side up. Roast about 20 minutes per pound, or until done. Chicken is done when juices run clear when a thigh is pierced with a sharp skewer or when a meat thermometer inserted in a thigh registers 180°F.

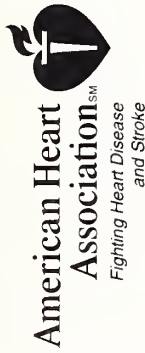
Baste chicken frequently with wine and broth mixture and turn bird twice during cooking time. Remove from oven and carve. Remove skin before serving. Serves 6

Nutrient Analysis per Serving

218 kcal	Calories	89 mg	Cholesterol	2 gm	Saturated Fat
31 gm	Protein	90 mg	Sodium	3 gm	Polyunsaturated Fat
1 gm	Carbohydrate	9 gm	Total Fat	3 gm	Monounsaturated Fat

*skin removed before eating

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Old-Fashioned Baked Beans

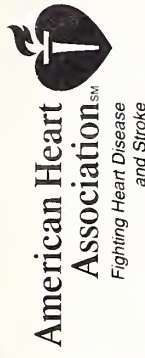
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|------------------------|-------------------------|---------------|-----------------------|
| 3 | cups dry navy beans | 2 | onions, thinly sliced |
| | Water | $\frac{3}{4}$ | teaspoon dry mustard |
| $\frac{3}{4}$ | cup chili sauce | $\frac{1}{2}$ | cup dark molasses |
| 1 $\frac{1}{2}$ | teaspoons cider vinegar | | |

In a stockpot over medium-high heat, combine dry beans with enough water to cover. Bring to a boil and boil 2 minutes. Remove pot from heat and let stand for 1 hour. Drain beans. Preheat oven to 300°F. Combine beans, 3 cups fresh water and all remaining ingredients in an ovenproof crock or casserole. Cover and bake 5 hours. Add more water if beans begin to dry out. Serves 8

Nutrient Analysis per Serving

254 kcal	Calories	0 mg	Cholesterol	0 gm	Saturated Fat
13 gm	Protein	283 mg	Sodium	0 gm	Polyunsaturated Fat
51 gm	Carbohydrate	1 gm	Total Fat	0 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Indian Pudding

- | | | | |
|---------------|------------------------|---------------|--------------------------|
| 2 | cups skim milk | $\frac{1}{2}$ | teaspoon ground cinnamon |
| $\frac{1}{4}$ | cup cornmeal | | |
| $\frac{1}{4}$ | cup sugar | $\frac{1}{4}$ | cup molasses |
| $\frac{1}{8}$ | teaspoon baking soda | 1 | cup cold skim milk |
| $\frac{1}{2}$ | teaspoon ground ginger | | Nutmeg |

Preheat oven to 275°F.

Heat 2 cups skim milk in a double boiler or a medium saucepan over low heat. Add cornmeal, stirring constantly. Cook 15 minutes, or until thick, stirring constantly. Remove from heat. Set aside.

In a bowl, combine sugar, soda, and spices. Stir to mix well. Add to cornmeal mixture and stir. Add molasses and 1 cup cold milk. Stir to mix thoroughly. Pour into a 1-quart casserole and bake 2 hours.

Serve warm with a light sprinkling of nutmeg. Serves 8

Nutrient Analysis per Serving

95 kcal	Calories	2 mg	Cholesterol	0 gm	Saturated Fat
3 gm	Protein	64 mg	Sodium	0 gm	Polyunsaturated Fat
20 gm	Carbohydrate	0 gm	Total Fat	0 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Asparagus par Excellence

- | | | | |
|-----|---|-----|----------------------------------|
| 1/4 | cup diced onion | 2 | teaspoons diced pimiento |
| 1 | green bell pepper, chopped | 1/2 | teaspoon crumbled tarragon |
| | Freshly ground black pepper to taste | 2 | teaspoons finely chopped parsley |
| 1/2 | cup water | | |
| 2 | 10-ounce packages frozen, no-salt-added, asparagus spears | | |

Bring onion, bell pepper, black pepper and water to a boil in a skillet over medium-high heat. Reduce heat, cover and simmer 5 minutes. Add asparagus and cook for 5 minutes, or until tender-crisp. Sprinkle remaining ingredients on top. Serves 6

Nutrient Analysis per Serving

28 kcal	Calories	0 mg	Cholesterol	0 gm	Saturated Fat
3 gm	Protein	5 mg	Sodium	0 gm	Polyunsaturated Fat
5 gm	Carbohydrate	0 gm	Total Fat	0 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Baked Catfish

- | | | |
|---|---|---|
| Vegetable oil spray | 2 | tablespoons acceptable margarine,* melted |
| 2 pounds catfish filets (6 pieces) | 2 | tablespoons chopped fresh parsley |
| 3/4 cup low-fat buttermilk | | Garnish: |
| 1/4 teaspoon salt | 6 | lemon wedges |
| 1/4 teaspoon hot pepper sauce | | |
| 3 ounces (about 30) cholesterol-free, low-saturated fat, low-sodium wheat crackers, crushed | | |

Preheat oven to 400°F. Lightly spray a baking dish with vegetable oil. Rinse fish and pat dry. Set aside.

Combine buttermilk, salt and hot pepper sauce in a small shallow dish. Place cracker crumbs on a plate. Dip filets first in buttermilk, then in crumbs, taking care to coat evenly.

Place filets in prepared baking dish. Drizzle 1 teaspoon margarine over each fillet. Bake uncovered 15 to 20 minutes, or until fish flakes with fork.

Arrange fish on warmed serving platter and sprinkle with chopped parsley. Garnish with lemon wedges. Serves 6

*Select margarine with liquid oil as the first ingredient and no more than 2 gm of saturated fat per tablespoon.

Nutrient Analysis per Serving

299 kcal	Calories	95 mg	Cholesterol	3 gm	Saturated Fat
35 gm	Protein	356 mg	Sodium	3 gm	Polyunsaturated Fat
10 gm	Carbohydrate	12 gm	Total Fat	5 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Harvard Beets

- 2 pounds fresh beets, untrimmed
- 1½ tablespoons sugar
- ¼ cup orange juice
- 1½ teaspoon salt
- 2 tablespoons cider vinegar
- ½ teaspoon grated lemon rind
- 2 tablespoons fresh lemon juice
- 1½ teaspoons acceptable margarine*
- ¼ teaspoon garlic powder

Trim leaves off beets, leaving 1-inch tops. Do not cut off root end. Rinse thoroughly but do not peel. Place beets in a saucepan over medium-high heat. Cover with water and bring to a boil. Reduce heat and cook 30 minutes, or until knife pierces beet easily. Remove beets from heat and drop into cold water. Slip off skins and dice beets into cubes. Set aside.

In a saucepan, combine remaining ingredients except margarine and bring to a boil. Add beets and stir and cook 2 minutes more. Stir in margarine and serve.

Microwave Method: Cook and dice beets as directed above. Set aside. Combine sauce ingredients, except lemon rind, in heat-proof glass bowl and cook on high 3 to 3½ minutes, or until sauce bubbles and is thick. Add lemon rind and diced beets. Cook 2 minutes on high. Stir in margarine and serve. Serves 4; ½ cup per serving

*Select margarine with liquid oil as the first ingredient and no more than 2 gm of saturated fat per tablespoon.

Nutrient Analysis per Serving

78 kcal	Calories	0 mg	Cholesterol	0 gm	Saturated Fat
1 gm	Protein	142 mg	Sodium	0 gm	Polyunsaturated Fat
16 gm	Carbohydrate	2 gm	Total Fat	1 gm	Monounsaturated Fat

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Help Your Heart Recipes

This recipe is intended to be part of an overall healthful eating plan. Total fat intake should be less than 30 percent of your total calories for a day — not for each food or recipe.

Braised Sirloin Tips

- ¼ teaspoon freshly ground black pepper
- 2 cloves garlic, finely minced
- ½ cup finely chopped onion
- 1½ teaspoon unseasoned meat tenderizer
- 1½ cup low-sodium beef broth
- ½ cup dry red wine
- 2 pounds beef sirloin tips, all visible fat removed, cut into cubes and drained on paper towel
- 1 tablespoon light soy sauce
- 2 tablespoons cornstarch
- ¼ cup cold water
- ¼ cup minced fresh parsley

Place large, nonstick skillet over medium-high heat. Sprinkle pepper and meat tenderizer on meat. Brown meat on all sides, turning often, until well browned. Add garlic and onions and cook until onions are translucent.

Add broth, wine and soy sauce. Heat to boiling. Reduce heat, cover and simmer 1½ hours, or until meat is tender.

In a small bowl, blend cornstarch and water until smooth; slowly pour mixture into skillet, stirring constantly. Continue to cook and stir until gravy thickens. Sprinkle parsley on top. Serve with rice if desired. Serves 8

Nutrient Analysis per Serving

177 kcal	Calories	67 mg	Cholesterol	2 gm	Saturated Fat
26 gm	Protein	244 mg	Sodium	0 gm	Polyunsaturated Fat
5 gm	Carbohydrate	5 gm	Total Fat	2 gm	Monounsaturated Fat

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Medicine in the News

Health Care Access Foundation

As of June 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 11,606 medically indigent persons, received 17,528 applications and enrolled 35,138 persons. This program has 1,683 volunteer health care providers including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Breast Cancer is Number One Cause of Malpractice Claims and Suits

A 10-year study by the Physician Insurers Association of America concludes that breast cancer is the number one cause of malpractice claims and suits.

According to the study, which tracked more than 125,000 actions filed since 1985, insurers pay out more for

breast cancer than anything except brain-damaged infants.

More than 60% of breast cancer claimants were under age 50; a time when breast cancer is less common and diagnosis is more difficult. The largest source of breast cancer related claims is delayed diagnosis.

Failure to find physical symptoms suspicious, failure to follow-up in a timely manner and negative mammograms are three leading causes. Other causes include misread mammograms, failure to perform proper biopsy, delay or failure to consult, failure to react to mammograms, distraction by other health problems, failure to order mammograms, poor communication and inadequate physical exam.

The amount paid per breast cancer claim is rising as well. From 1985 to 1993 the average for delayed diagnosis was about \$190,000. However, from June through December 1994 it was \$307,000.



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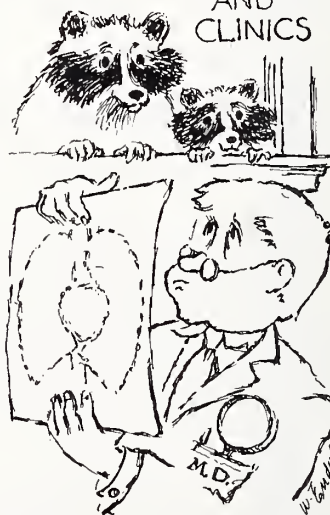
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AMS Newsmakers

Dr. F. Anthony Bennett Jr., of Little Rock, has been elected to a three-year term as governor of the American College of Cardiology's Board of Governors for Arkansas.

Dr. Joe Crumpler, of Russellville, has joined Saint Mary's Regional Medical Center as medical director.

Dr. Stuart Fitzhugh, the State Health Department's deputy director for health protection and services, was awarded the Dr. Tom T. Ross award at the Arkansas Public Health Association's annual convention. The award is the association's most prestigious and is given in recognition of professional achievements.

Dr. Walter John Giller Jr., an orthopedic surgeon from El Dorado, was recently honored by the University of Arkansas Medical School's Chapter of Alpha Omega Alpha, the only national honor medical society in the world.

The Lonoke County Farm Bureau Women's Committee has named **Dr. B.E. Holmes** as honoree of the Mentor Program of Lonoke County. He was chosen because of his dedication and commitment to the people of Lonoke for 45 years.

Dr. J.R. Pierce Jr., of Pine Bluff, was named Boss of the Year during a recent banquet hosted by the Pine Bluff Chapter of Credit Professionals International. He has been a physician in Pine Bluff for 37 years.

Ashley Memorial Hospital and the city of Crossett recently honored **Dr. Robert Salb** for 47 years of service.

Dr. Mack Shotts, of Paragould, recently attended the American Occupational Health Conference in Las Vegas. Featured topics included preventing violence at work, rendering a medical opinion in a legal case, aggressive non-operative spine care, confidentiality in occupational medicine, carpal tunnel syndrome, and work hardening and rehabilitation.

The American Cancer Society has supported training and research in clinical oncology by awarding money to physicians each year through the Professional Education Clinical Awards Program for more than 40 years. The following AMS members will receive Clinical Awards for 1995: **Drs. Scott J. Stern, Suzanne Klimberg, Martin Hauer-Jensen and Kent Westbrook**, all of UAMS.

Drs. Joe B. Hall and J. Warren Murry, both of Fayetteville, are two of four recipients of the 1995 Eagle

Award given by Washington Regional Medical Foundation. The annual award recognizes outstanding health leadership in Northwest Arkansas.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. AMS Recipients for the month of May are as follows:

Verona Tice Brown	Batesville
James David Busby	Alma
Jeff John Carfagno	Maumelle
G. Lawrence Dunaway	Harrison
John Gregory Elders	Mountain Home
John Henry Finck	Mena
Benson Albert Grigsby	Crossett
Grady F. Herring	Little Rock
Clarence Leonard Kemp	Paragould
William Scott Lewis	Little Rock
Edward Newton McCollum	Decatur
Michael M. Miller	Little Rock
Thomas Alvin Pullig	Magnolia
William Harvey Riley	Little Rock
Rex Watson Ross	Conway
Vern A. Shotts	Paragould
James Floyd Smith	Fairfield
Sebastian A. Spades	Walnut Ridge
David Larry Staggs	Searcy
Joe Hill Stallings	Jonesboro
Tracy Dale Stewart	Little Rock
Anne Rowland Trussell	Little Rock
Oliver Wallace	Green Forest
John J. Westwood	Plainview
John Sewell Williams	Blytheville

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In Memoriam

Walter Preston Harris, M.D.

Dr. Walter Preston Harris, of Danville, died Thursday, May 4, 1995. He was 74.

He was preceded in death by his wife, Louise Woodrum Harris, and a brother Earl Harris.

Survivors include a son, Tommy Harris of Danville; two daughters, Patricia Harris-Yarock of Phoenix, Arizona and Mary Harris of Danville; two brothers, Joe Harris of Avondale, La. and Jim Harris of Bradford, N.Y.; two sisters, Dixie Lee Harris of Beacon, N.Y. and Genevive White of Jonesboro; and two grandsons.

E. Clinton Texter, Jr., M.D.

Dr. E. Clinton Texter, Jr., of Little Rock, died Thursday, May 4, 1995. He was 71.

Survivors include his wife, Jane C. Texter of Little Rock and their daughters, Cardie Texter of Boston, Patricia Hardage of Little Rock and Catherine Baker of Atlanta, Texas; a granddaughter, Elizabeth Starke Baker; a sister, Patricia Texter Palmer of San Carlos, California; and his step-mother, Norma Skinner Texter of Marysville, Michigan.

Henry N. Rogers, M.D.

Dr. Henry N. Rogers, of Mena, died Wednesday, May 3, 1995. He was 75 and a member of the AMS Fifty Year Club.

Survivors include his wife, Maxine Rogers, of Mena; a daughter, Nina Myrl Weinberg, of Great Falls, Va.; three sons, Henry Nelson Rogers III of Conway, Joseph Stockton Rogers of Fayetteville and James Trail Rogers of Minneapolis, Minn.; six grandchildren; a brother, William Fenna Rogers Jr. of Fairfax, Va.; and a host of family and friends.



Resolution

John T. Herron, M.D.

WHEREAS, the members of the Pulaski County Medical Society are grieved to learn of the recent death of a respected colleague, John T. Herron, M.D.; and

WHEREAS, he was a loyal member of this organization for twenty-four years, serving readily and capably in numerous leadership positions; and

WHEREAS, Dr. Herron's distinguished service as State Health Officer for many years gave evidence of his abiding concern for the welfare of his fellow citizens;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the permanent files of this Society; and

THAT, a copy of this resolution be sent to Dr. Herron's family as an expression of our sincere sorrow; and

THAT, a copy be forwarded to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

Board of Directors

May 17, 1995

By Order of the Memorials Committee

Samuel B. Welch, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

Harold D. Purdy, M.D.

WHEREAS, the members of the Pulaski County Medical Society observe with sincere sorrow the recent death of a highly esteemed member, Harold D. Purdy, M.D.; and

WHEREAS, Dr. Purdy had earned the respect and appreciation of his colleagues for twenty-five years of loyal membership in this Society, which included distinguished service on the Board of Directors, the Council of the Arkansas Medical Society, and as President in 1984; and

WHEREAS, Dr. Purdy will be remembered by his patients, his peers, and the community as a caring and capable physician;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the permanent files of this Society; and

THAT, a copy of this resolution be sent to Dr. Purdy's family as a token of our heart-felt sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

Board of Directors

May 17, 1995

By Order of the Memorials Committee

Samuel B. Welch, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

Bryant S. Swindoll, M.D.

WHEREAS, the membership of the Pulaski County Medical Society notes with genuine sorrow the recent death of an esteemed colleague, Bryant S. Swindoll, M.D.; and

WHEREAS, Dr. Swindoll demonstrated his devotion to his profession by faithful membership in this Society for over thirty years; and

WHEREAS, Dr. Swindoll made a lasting contribution to the public health of this state through his long and exemplary service as Director of the Arkansas State Health Department's Chronic Disease Division;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the archives of this Society; and

THAT, a copy of this resolution be sent to Dr. Swindoll's family as a token of our heart-felt sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

Board of Directors

May 17, 1995

By Order of the Memorials Committee

Samuel B. Welch, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

E. Clinton Texter, M.D.

WHEREAS, the members of the Pulaski County Medical Society are grieved to learn of the recent death of a respected member, E. Clinton Texter, M.D.; and

WHEREAS, he was a faithful member of this organization for over thirty years; and

WHEREAS, Dr. Texter will long be remembered by his students as a caring and effective teacher and by his colleagues as a major contributor towards the academic and clinical advancement of his chosen field of Gastroenterology;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the archives of this Society; and

THAT, a copy of this resolution be sent to Dr. Texter's family as an expression of our heart-felt sorrow; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

Board of Directors

May 17, 1995

By Order of the Memorials Committee

Samuel B. Welch, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

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Things To Come

July 30 - August 4

Update in Internal Medicine, 1995. The Waldorf-Astoria, New York, NY. Sponsored by Columbia University College of Physicians and Surgeons, Center for Continuing Education and the Departments of Medicine of Columbia Presbyterian Medical Center and Beth Israel Hospital Boston. For more information, call (617) 324-2202.

August 20-25

Advance in Internal Medicine. Hyatt Regency, Monterey, California. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

August 28-31

Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 16

Benign Essential Blepharospasm - 13th Annual International Conference & Scientific Symposium. Red Lion Hotel, Sacramento, California. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 30 - October 1

7th Annual Ultrasound Update: 1995. Red Lion Hotel, Sacramento, California. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

October 5 - 7

Contemporary Cardiothoracic Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

October 8 - 12

Medical Oncology Board Review Course. The Ritz-Carlton Pentagon City, Arlington, VA. Sponsored by the Office of Continuing Medical Education, The George Washington University Medical Center. For more information, call (202) 994-4285.

October 13 - 15

"Advances in Sonography," - a fourth annual post-graduate educational course. Sheraton Chicago Hotel and Towers, Chicago, Illinois. Sponsored by the Center for Bio-Medical Communication. Designated for 17.75 credit hours of Category 1 of the Physician's Recognition Award. For more information, call (201) 385-8080.

November 3-5

7th Annual Infectious Disease Review Course for the Practicing Physician. Hyatt Regency Bethesda in Bethesda, Maryland. Sponsored by The Society of Radiologists in Ultrasound. For more information, call (201) 385-8080.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.



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July 27 - 29

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Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

Medical Grand Rounds, Thursdays, 12:00 noon, Conference Room, Bldg. 4

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Joint Tumor Conference, 1st Wednesday, 12:00 noon, CARTI Auditorium. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

GI Conference, 4th Friday, 11:30 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Clinical Conference, Mondays, 4:00 p.m., UAMS, room 3S06

Cardiology Graphics Conference, Wednesdays, 12:00 noon, UAMS, room 3S06

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:15 p.m., Radiology Conference Room at UAMS

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room

Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room

Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Behavioral Sciences Conference, 1st & 4th Friday, 12:30 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:30 p.m., Warner Brown Hospital
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:30 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:30 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, AHEC - South Arkansas. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Pediatric Conference, 3rd Friday, 12:30 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:30 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:30 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:30 p.m., AHEC - South Arkansas

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Fridays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Thursdays, 7:30 a.m., Washington Regional Medical Center
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conference, June 23, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital



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Care Network	65
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Computer Assistance	inside back
Freemyer Collection System	107
Little Rock VA Medical Center	74
Med Plus Leasing	69
<i>Creative Advantage</i>	
Medical Arts Laboratory	70
Radiology Resources	102
Riverside Motors, Inc.	92
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	back cover
<i>Strategic Marketing</i>	
Spectrum Health Care Services	101
State Volunteer Mutual Insurance Company	66
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 3

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page
116

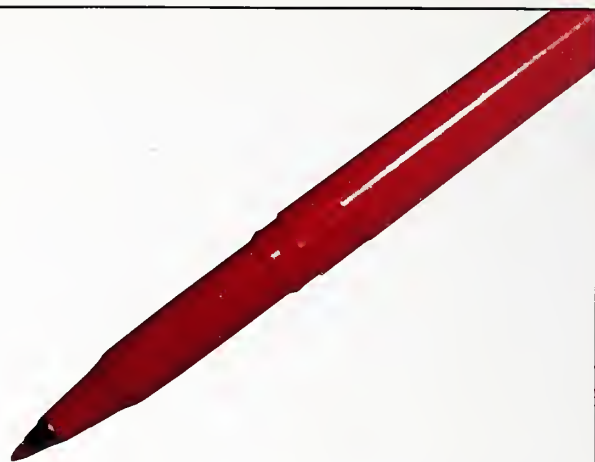
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page
125

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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CONTENTS

FEATURES

- 116 Stacy
Editorial
Alex E. Finkbeiner, M.D.
- 119 Diffuse Cavernous Hemangioma - A Case Report
and Review of the Literature
Nick Paslidis, M.D., Ph.D.
John Burpeau, M.D.
Kristina Stroehlein, M.D.
Anita Steephen, M.D.
- 122 Management of Echinococcosis in Mongolia
N. Davaatseren, M.D.
A. Otogondalai, M.D.
G. Nyamkhuu, M.D.
A.H. Rusher, M.D.
- 125 Medical Ethics vs. Managed Care: Medical Journals
Voice Physicians' Concerns
Loss Prevention Case
Kathleen M. Roman
- 127 Ethical Issues in Managed Care
American Medical Association
- 128 Fundamental Elements of the Patient-Physician
Relationship
American Medical Association

DEPARTMENTS

- 129 Cardiology Commentary & Update
132 State Health Watch
136 Arkansas HIV/AIDS Report
138 New Members
141 Radiological Case of the Month
143 Medicine in the News
145 AMS Newsmakers
146 In Memoriam
147 Things to Come
148 Keeping Up

*Don't miss the
special October issue
on Domestic Violence*

Cover photo taken by Robyn Horn, Arkansas Department of Parks and Tourism.

Stacy

Recapturing the reasons for going into medicine in the first place

Alex E. Finkbeiner, M.D.

I haven't known her long. She's incredibly bright and very dedicated to her studies. She just finished her freshman year of undergraduate school; was nearly devastated upon receiving a B in a history course. She is totally committed to being accepted into medical school and becoming a physician; already studying for the MCATs.

For several years I have interviewed medical school applicants for admission. I probably interviewed some of you. The admission process is difficult for all involved. Through a process of natural selection, all of the applicants are intelligent and dedicated with excellent grade points. As an interviewer, one attempts to ascertain the applicant's commitment, character and whether he or she would make a "good doctor"; pretty subjective stuff. In my experience, virtually every applicant responds to the question, "Why do you want to become a doctor?" by replying, "I want to help people" and "Science, particularly biology, is so interesting and intellectually stimulating." Should we interpret these responses merely as political correctness and/or naivety? Perhaps, but as one listens to them one gets a sense of true sincerity; a conviction that the applicants really do want to help people. I suspect most of you were similarly motivated as you began your medical careers; at least that's what you said when we interviewed you.

Today it seems that when two or more doctors gather together one or more of the following invariably become the dominant themes: Reimbursement, managed care, capitation, paper work, government interference, medicine is not what it used to be, I don't want my children to go into medicine.

Stacy doesn't understand any of that stuff. She's like all of you were when you interviewed for admission to medical school. She wants to help people and she finds science and biology to be extremely interesting and challenging.

As I pulled into her driveway the other night, Stacy hurriedly ran to greet me. She appeared as excited as

anyone I've ever seen. She's working this summer in a research laboratory at Children's Hospital and was invited to witness surgery; a thoracotomy on an ill child. She could hardly contain herself as a torrent of words came forth describing her experience of observing for the first time the real-life drama of medicine and an open chest of a living being; lungs expanding/contracting and the heart, a living heart, beating. She observed the people she wants to emulate: doctors, nurses, technicians performing their roles to help this sick child. At that moment, no one seemed concerned regarding being reimbursed for their time, effort and expertise. It was as if that single event summarized everything she had ever thought about medicine; absolutely confirmed her desire to be a physician.

How long will her naivety of wanting to help people and her commitment to intellectual challenges last? How long before she understands that medicine is about managed care not medical care, capitation not compassion, paychecks not well-baby checks?

I know. I know. When we interviewed for medical school we could truthfully say we wanted to help people and be intellectually stimulated. However, medicine has changed; it's not like it used to be. In time, of course, we wizened veterans of medicine will shed light on the subject of medicine for Stacy. She will soon learn that medicine is not about living, beating hearts but about deadbeat heartless governmental bureaucrats and money managers.

I've got to figure out a way to keep Stacy away from physicians until she finishes her medical training. If she develops our cynicism too early, this bright, dedicated individual might not want to become a physician. Come to think of it, instead of trying to keep Stacy away from physicians maybe she can convince all of us to share her experience. Maybe we should take time out of our busy schedules of filling out forms and monitoring our reimbursements and investments and do what Stacy did by going to the operating room and observing an open, living chest to see if we can recapture the reasons we went into medicine in the first place.

While we educate Stacy all about medicine maybe she can teach us a few things.

* Alex E. Finkbeiner, M.D., is Professor of Urology at the University of Arkansas for Medical Sciences, Department of Urology and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.



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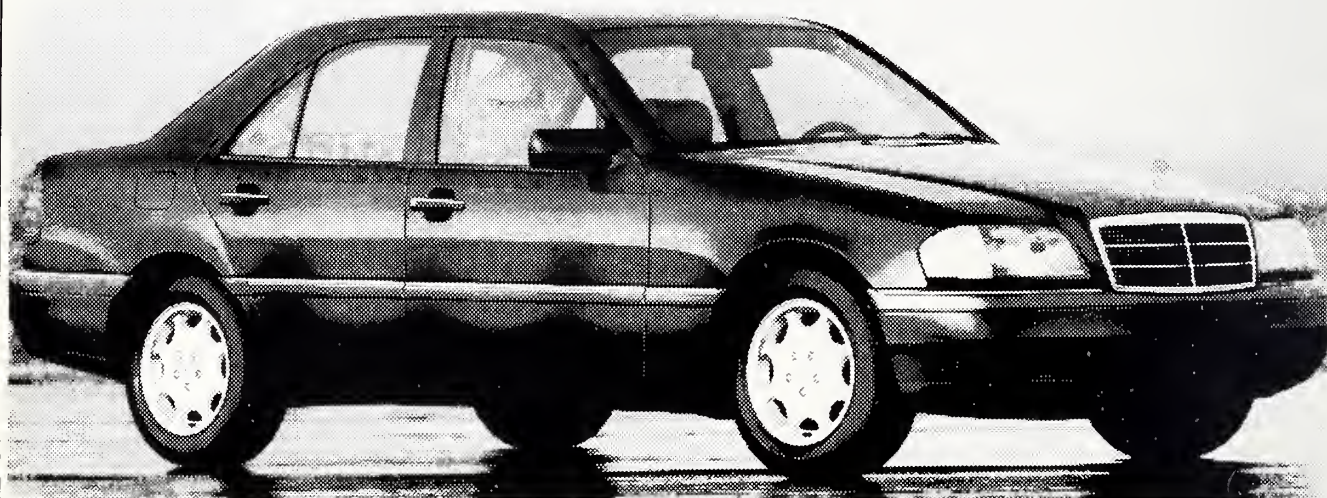
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Diffuse Cavernous Hemangioma - A Case Report and Review of the Literature

Nick Paslidis, M.D., Ph.D.*

John Burpeau, M.D.**

Kristina Stroehlein, M.D.**

Anita Steephen, M.D.**

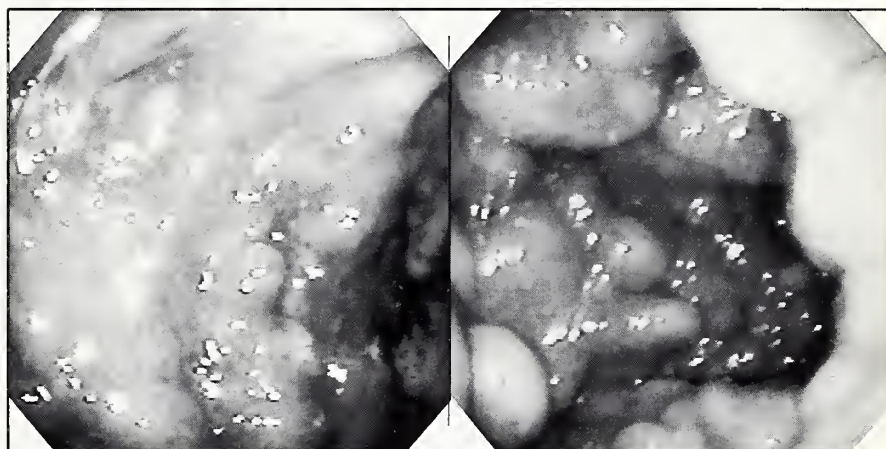
INTRODUCTION

Diffuse Cavernous Hemangiomas are very rare lesions. Therefore, there is limited information and even less clinical awareness of its presentation. Recently, we encountered such a case which stimulated our interest to complete a literature review and report.

CASE REPORT

A 38-year old Hispanic male from El Salvador was admitted to the hospital with intermittent rectal bleeding after defecation. This had been a chronic problem since the age of 4 years. Patient noticed a worsening of his hematochezia over 8 days prior to admission, with weakness and fatigue and with the most recent hemoglobin of 7.2 gm/dl being on the day prior to admission. He denied any diarrhea but admitted to weight loss with decreased appetite. He had been operated on for bleeding hemorrhoids at the age of four. On physical exam, his abdomen was unremarkable but his rectal tone was poor and contained a reddish-maroon mucoid discharge which was guaiac positive without any obvious masses.

The patient was admitted to the hospital. Initially, a Barium enema revealed signs of inflammation. A colonoscopy was performed that revealed a violaceous nodular lesion at the anal verge that extended



Figures 1A and 1B: Colonoscopy findings of the bluish submucosal masses at the anal verge which extended circumferentially up to 35 cm region.

circumferentially in the rectosigmoid colon up to 35 cm, where an abrupt cut-off to normal tissue was identified up to the ileocecal valve (figures 1A and 1B). Biopsies were taken carefully. The biopsy revealed dilated vessels filled with blood and lymphatic fluid compatible with benign hemangioma.

The patient underwent a rectosigmoid colon resection with diverting colostomy. Examination of the resected portion concluded that this was cavernous hemangioma involving the submucosa. However,

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** Drs. Burpeau, Stroehlein and Steephen are with the University of Texas Medical School, Dept. of Pathology.

there were multiple areas where abnormal vessels penetrated through the muscularis and adventitial tissue. Additionally, there were multiple areas of thrombosis and dystrophic calcifications (figure 2). Patient recovered well post operatively without any further known bleeding episodes to this date. Three months after the initial resection, patient had a reanastomosis of the descending colon to the rectum.

The surgical specimen of approximately 9 x 12 cm from the rectosigmoid colon was sent to the pathology lab. On cut section, the submucosa appeared to be partially composed of dark red bloodclot-like material, without any local identified lesions. Microscopic sections revealed a cavernous hemangioma involving mostly the submucosa with multiple vessels permeating into and through the muscularis and into the adventitial and adipose tissues. There were multiple areas of thrombosis and dystrophic calcification which involved some of the abnormal vessels.

DISCUSSION

One of the many causes of acute and chronic gastrointestinal tract hemorrhages is vascular malformations which include angiodysplasias, telangiectasias, arteriovenous malformations, ectasias and hemangiomas. Of the above, hemangiomas are quite rare. Diffuse cavernous hemangiomas of the colon are infrequent as only about 100 cases have been reported to this date in the literature.

The usual presentation of cavernous hemangiomas of the colon in childhood is outlined by recurrent, painless, massive rectal bleeding although rectal tenesmus and intestinal obstruction can be the presenting complaint.¹ Patient age ranges from 5-35 years old. It has

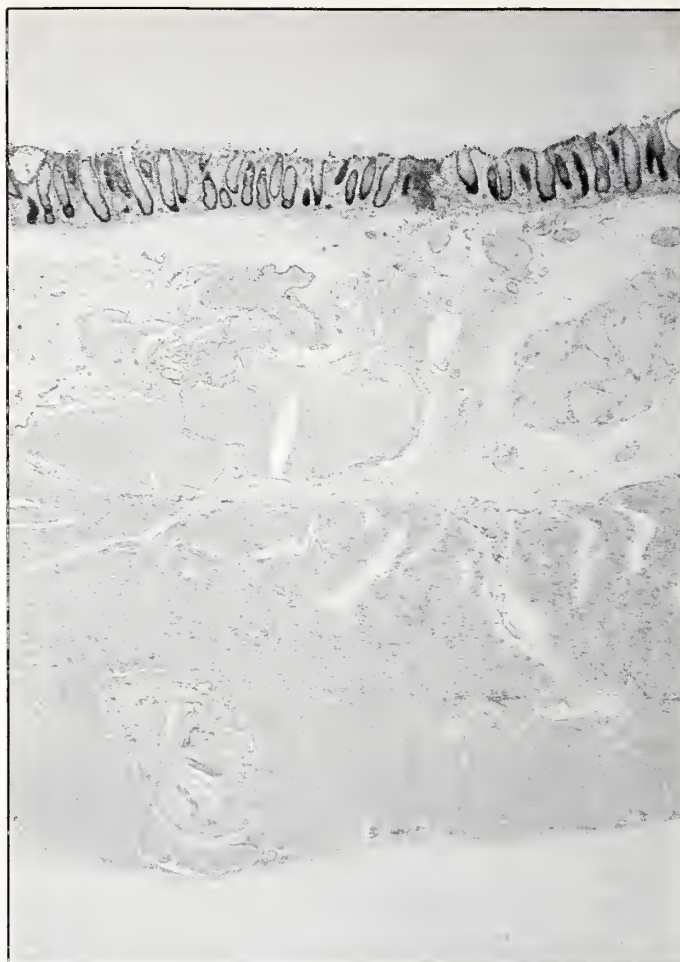


Figure 2: Photomicrograph of a section of the involved colon showing hemangiomatous involvement of the mucosa and submucosa region.

been described as the most aggressive form of benign intestinal mucocutaneous malformation characterized by large thin walled vessels that are supported by a stroma of connective tissue of fibrous and smooth muscle. The location is primarily in the rectosigmoid region.

Cavernous hemangiomas as the cause of gastrointestinal bleeding should be thought of when there is a clinical triad of intermittent hematochezia, multiple ectopic pelvic phleboliths on abdominal films and cutaneous hemangiomas.

Several groups believe that there are three stages of stem-cell development.² The first stage is believed to be the capillary hemangioma, the second stage is the cavernous hemangioma and the third stage is the arteriovenous fistulas.

Diagnosis is achieved with endoscopy by identifying bluish submucosal masses noted within engorged vascular channels.³ Other diagnostic means such as abdominal radiographs, barium enema and mesenteric angiography are slightly helpful. Aylward et al suggested that computerized tomography can be utilized in diagnosis of lesions by infiltrative large thickened rectosigmoid mesentery. Also, there has been an association of cutaneous and mucous membrane hemangiomas that can be identified by careful physical examination.⁵ These sites should include skin, mouth, lips, tongue, pharynx and perianal skin region. Biopsy of the lesion is not advisable because of the great risk of life-threatening hemorrhage and exsanguination. Gentry et al reported a 45 percent mortality in 20 untreated patients with diffuse cavernous hemangiomas.⁴

Most of the literature is surgical since once diagnosed, the treatment of choice is surgical resection. Sclerosant agents⁶ and local excision⁷ have been attempted to a lesser extent.

The most effective and successful option for treat-

ment is abdominoperitoneal resection.⁸ Other options exist such as rectal mucosectomy⁹ and arterial embolization of feeding vessels of the inferior mesenteric artery. The former method has limited literature for evaluation of their results and the latter approach is without consistent improvement of the overall patient's status. Transanal rectal mucosectomy and sphincter preserving operation has been reported recently with success as conventional bowel resection and colostomy have been associated with large blood loss and incontinence which is of significant importance due to the young age of the patient population.

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Management of Echinococcosis in Mongolia

N. Davaatseren, M.D.*

A. Otogondalai, M.D.*

G. Nyamkhuu, M.D.*

A. H. Rusher, M.D.**



Figure 1: Large calcified echinococcal cyst under left diaphragm.

PERSONAL COMMENT:

As a surgeon who struggled to answer the 1994-95 Surgical Education and Self Assessment Program Patient Management problem #2 dealing with Echinococcal disease, I thought it beneficial to share with American colleagues some information on this unusual pathology. The article to follow is based on a report

by Mongolian surgical instructors with whom I became acquainted in October 1993 while working in their hospital in Ulaanbaatar. Although the paper is not a prospective study, it does give an overview of diagnosis, treatment, and outcome from a disease seldom seen in our country. Echinococcosis is frequently encountered in Mongolia and other countries (Africa, Middle East, Australia, South America) where animal husbandry is a way of life. Although this parasitic disease is rare in the USA, it is becoming more fre-

quently seen with increased numbers of American world travelers and foreign immigrants into this country.

INTRODUCTION:

Echinococcosis, also known as hydatid disease, is caused by the parasite *Echinococcus granulosus*. This is a tapeworm of dogs and wolves, for which sheep are the main intermediate hosts. When humans unknowingly ingest the egg of these worms, they become intermediate hosts. The newly hatched embryo then may pass transmucosally into the portal circulation and become encysted within the liver.

The resulting malady continues to be a serious problem for the medical care and the economy of many rural countries. In spite of a decrease in frequency of human echinococcosis in Mongolia, it still makes up 18% of the surgical cases in Central Hospital and it carries a 6% morbidity rate in affected patients. Scientific studies of echinococcosis started in Mongolia after 1921, when Russian epidemiologists, biologists, veterinarians, and surgeons cooperated in the study of this disease process.

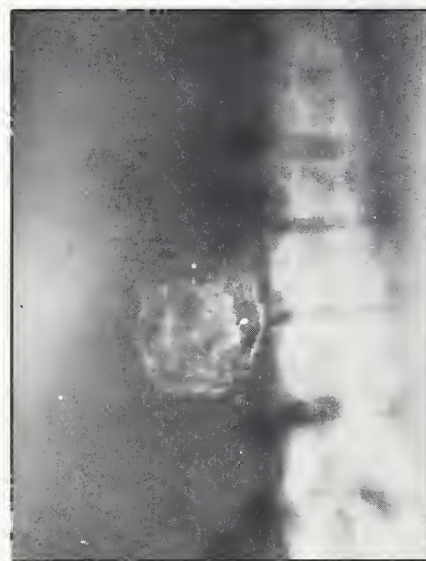
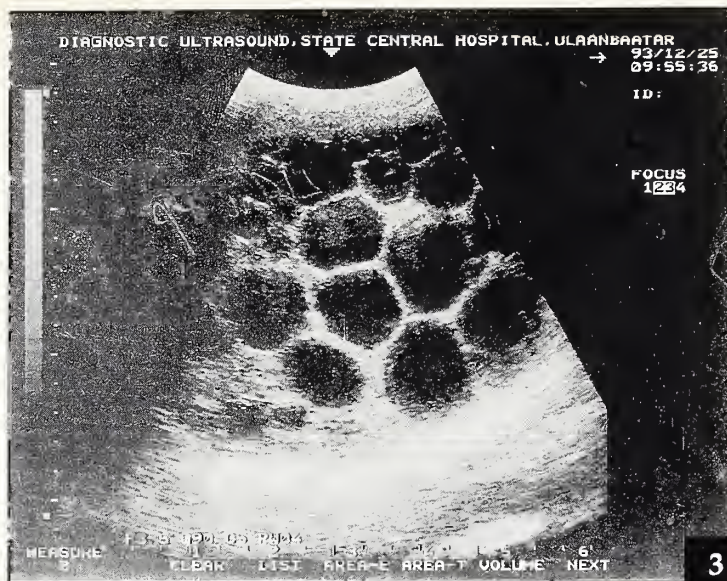


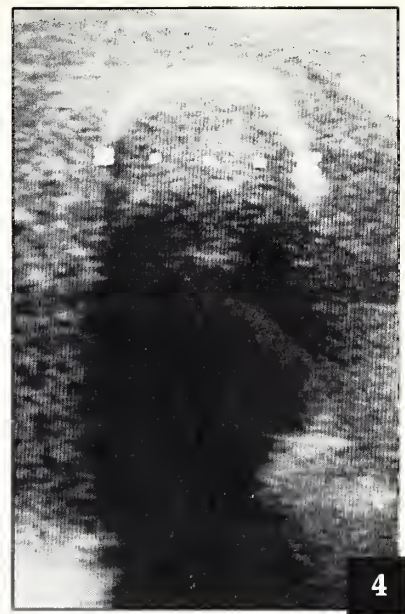
Figure 2: Small Calcified echinococcus (inactive) in the liver.

* Drs. Davaatseren, Otogondalai and Nyamkhuu are surgeons at the First Clinical Hospital and Mongolian Medical University in Ulaanbaatar, Mongolia.

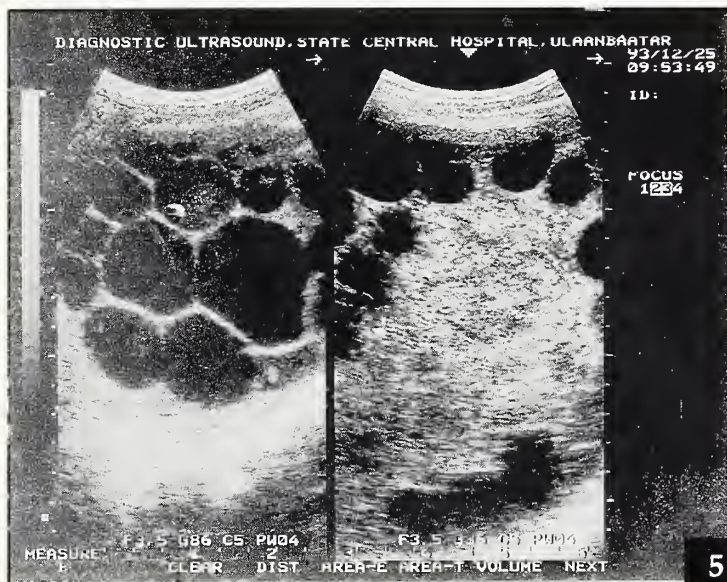
** Dr. Rusher is a surgeon in private practice, Jonesboro, AR.



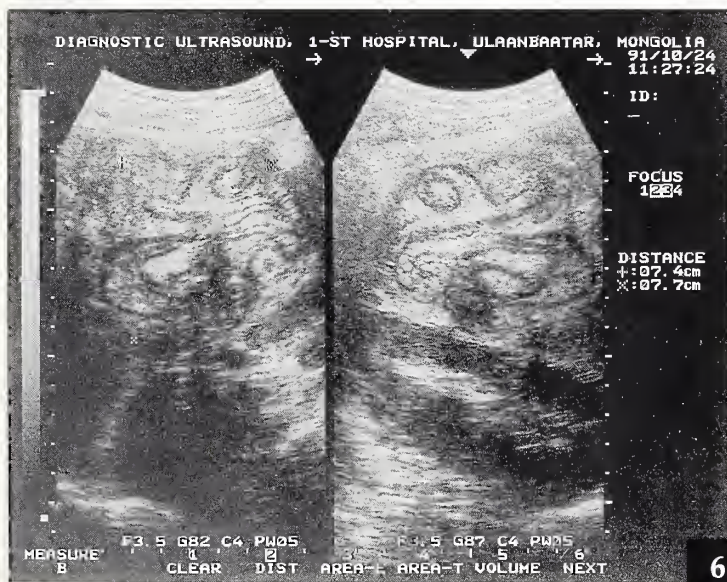
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Figure 3: Actively growing "honeycomb" echinococcus in the liver as seen on ultrasound.

Figure 4: Calcified echinococcus in the liver with "umbrella" sign.

Figure 5: "Honeycomb" sign on the left with partially dead central cyst seen on view at right.

Figure 6: Totally dead echinococcal cyst with "pattern" sign.

Based on a retrospective study of more than 1000 cases of echinococcosis since 1960, a research team headed by Professor P. Dolgor adapted into the practice of medicine in Mongolia several new diagnostic and operative methods. As a result, the statistics have shown a decrease in morbidity among patients (13% in 1946 to 2% in 1988) with more chronic, quiescent, calcified cysts being found.

CLINICAL MANIFESTATIONS AND DIAGNOSIS:

The variety of clinical manifestations of echinococcosis depends on stage, location, and size of the hydatid cysts. The following clinical stages have been proposed: Stage I - asymptomatic; Stage II - clinical manifestations of pain, swelling, tenderness, palpable mass; Stage III - clinical complications of the disease with rupture or suppuration. The diagnosis of echinococcosis is based on clinical findings, laboratory tests, and investigations with X-ray (Fig. 1 and 2), ultrasonography, and CT scans. Other less frequently used X-ray diagnostic techniques include pneumoperitoneum, retroperitoneum, splenopertography, fistulography, radiosintillation scans, and finally laparoscopy when indicated.

Ultrasonography has been available in Mongolia since 1983. The Japanese equipment used has been helpful in establishing and describing the following typical ultrasonographic findings. First, the typical clear round contour of a hydatid cyst capsule. Secondly, a round shaped formation with multiple septae (daughter cysts) creating a "honeycomb" effect (Fig. 3). Thirdly, complete reflection of ultrasound waves from the top of a fibrotic, calcified cyst creating the "umbrella sign" (Fig. 4). Fourthly, live daughter cysts surrounding a partially dead main central cyst (Fig. 5), and finally, the content of a totally dead non-calcified cyst reveals a "patterned" sign (Fig. 6).

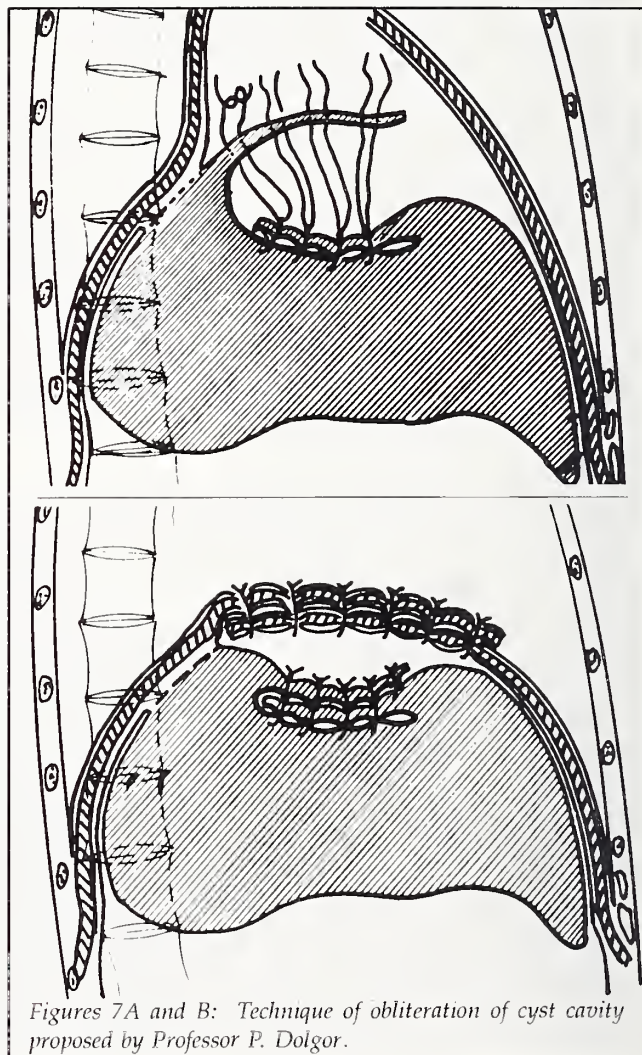
TREATMENT:

The primary treatment for echinococcal disease is surgical. Operative approach depends on location and size of cyst and on the condition of the patient. These approaches may be transthoracic, thoracoabdominal, or subcostal, transverse or midline abdominal. The open technique of removing an echinococcal cyst is used in severe cases of suppuration or rupture of the cyst for the prolonged evacuation of purulent drainage. The semi-open technique may also be used in case of suppuration of the cyst. After the cystic content is evacuated and irrigated, one or two large tubes are used in the residual cavity for external drainage. A second operation is performed after the patient's clinical condition improves for removal of the residual cavity. The closed method is used preferentially when the cysts are comparatively young with thin elastic and fibrotic walls. This method is suggested for echinococcosis of the general abdominal cavity. The negative aspect of this method is that the remaining space created by the removed cyst, may require repeated aspirations of serous fluid by percutaneous puncture or by additional surgery to obliterate the space. Surgical obliteration of the residual cavity is done by removing the non-vascularized parts of the fibrotic capsule and re-approximating the remaining parts. This most commonly applies to very large cysts deep within the liver parenchyma.

Large cysts under the right diaphragm are managed in a special manner first proposed by Professor P. Dolgor (Fig. 7). The cyst is carefully aspirated with care not to spill the contents. It is irrigated then with 3-5% Formalin solution for a short time followed by 1:5000 Furacillin solution. Following the repeated irrigations, aspirations, and "sterilization" of the cyst, the fibrotic capsule is separated from the diaphragm and surrounding tissue by sharp and blunt dissection staying close to the fibrotic capsule. Once the non-vascularized capsule is removed, the remaining defect in the liver is closed with an overlapping mattress stitch. If the diaphragm has been thinned out excessively, it

too can be closed with a similar overlapping technique. The operation is concluded by draining the subdiaphragmatic space. Bile fistulas, if present, should be sutured and obliterated and well-drained. Hydatid cysts that rupture into the pleural space or lung require additional drainage and possibly pulmonary lobectomy.

Complications of this surgical treatment include abscess, empyema, recurrent hydatid disease, biliary fistulas, and bleeding. Resection of liver is rarely necessary. The Mongolian national surgical specialists have learned to successfully manage the complicated aspects of this parasitic disease. Their post-operative results have been good in 80% of patients so treated. Satisfactory results are found in 17% with only a 3% unsatisfactory outcome over a six-year period of observation. Thanks to the combined efforts of national clinicians and surgeons, the morbidity of echinococcal disease in this ancient eastern land is decreasing. The pathological condition, however, remains as an endemic problem in Mongolia and as a diagnostic challenge to unsuspecting physicians with such patients in America.



Figures 7A and B: Technique of obliteration of cyst cavity proposed by Professor P. Dolgor.

Medical Ethics vs. Managed Care:

Medical Journals Voice Physicians' Concerns

Kathleen M. Roman*

Are managed care contracts impeding doctors' ability to fulfill their ethical responsibilities within the scope of the physician-patient relationship? If medical society journals throughout the country are any indication, the answer is yes. Physicians are increasingly voicing concern about the ways in which managed care policies and procedures inhibit adequate patient care.

Take, for example, an article that appeared in the June 19, 1995 issue of *American Medical News*. In this article, the author aired his frustrations regarding the policies of a managed care organization of which he is a member. In one instance, a family with several children was assigned to the author's practice - with the exception of one child who, for some unknown reason, was assigned to a physician on the other side of town. The health plan's less-than-proactive response to this problem was frustrating for the child's family as well as for the reporting physician.

This same doctor shared another problem involving a child whom he treated for seborrheic dermatitis. The condition persisted and the doctor wanted to refer the child to a dermatologist.

This required approval of an MCO board which met on a weekly basis and which did approve a one-time-only visit to the specialist. Following this, the child required further dermatologic care, but this once again necessitated the approval of the MCO board following its next meeting. The physician decried the needless suffering of the patient and the inefficiency of a system that values bureaucracy over care.

He included in his article several other examples of poor communication, mis-assignment and insensitivity to the inconvenience of patients.

Another topic receiving coverage in numerous medical journals is length of stay. Many MCOs are mandating that patients go home at what are considered optimal¹ recovery times. Ostensibly, the theory behind this reasoning is that, if appropriate care is

provided, the patient's recovery *will* be optimal. Not necessarily. In New Jersey, for instance, where managed care entities were increasingly requiring that normal deliveries be sent home within twenty-four hours, the doctors were so outraged that the legislature stepped in to put an end to this stipulation. Physicians feel frustrated when they see patients being required to go home when there are valid reasons why the patient should still be hospitalized. The Medical Society of New Jersey has also been active in advocating for continued treatment by existing providers when patients with certain conditions much change managed care plans. Additionally, the Society is putting pressure on the state legislature to force MCOs to provide more information to its enrollees and to discipline MCOs that penalize doctors for fulfilling their ethical responsibility to act as patient advocates.

Many doctors are refusing to sign patients out of hospitals under these cost-only circumstances, electing instead, to abide by professionally designed practice parameters and guidelines. Hospitals can go to bat for their physicians by providing support for the doctors' care decisions, especially when they concur with the hospital's practice guidelines.

When there is an emergent condition, the MCO may be accruing risk to itself for lagging. In the case of Blue Cross and Blue Shield of Arizona vs. The Arizona Board of Examiners, a physician determined that his patient required gallbladder surgery and so informed the insurer. The UR physician denied the procedure stating that the indications were insufficient and that a second opinion would be necessary before the surgery could again be considered. The surgeon performed the surgery without the Blue's permission and test results indicated that the gallbladder had indeed been diseased. At this point, the MCO agreed to pay for the surgery. But the physician appealed to the state on the patient's behalf claiming that the original denial of coverage indicated a reckless disregard for the patient's safety. The board reviewed the complaint and issued a mild form of discipline, a formal "letter of concern." The Blues appealed but the superior court

* Kathleen M. Roman is Assistant Vice President of Risk Management at The Medical Protective Company, Fort Wayne, Indiana.

rejected the argument finding that the board did have jurisdiction to review the "medical decisions" made by the MCO director.

While the various state medical societies continue to apprise their members of areas of concern regarding managed care, and the courts continue to produce case law that will lead to standards, this seems a likely time for physicians to work together with other health care professionals to educate managed care entities about ways in which managed care actually can impede both quality and cost improvement progress. By welcoming and by participating in dialogue with MCOs, physicians can be catalysts for change, change that will benefit all health care.

State medical societies are keeping an eye on MCOs and apprising doctors of the risks - and making suggestions about how to address the risks. For example, the Ohio State Medical Association has forwarded a legislative proposal on "managed care fairness." The society indicated that its membership felt such a proposal was needed and that the managed care marketplace had eroded the doctor-patient relationship.

One Florida medical association decided to rate the local managed care entities on a number of issues. Their survey, in which they solicited input from society member physicians resulted in a breakdown of data concerning quality of services available to patients, timeliness of response from the MCO, reliability in keeping its end of the financial bargain, and contract issues. Other states are also paying attention to contracting issues. In a similar fashion, *American Medical News* requested in its June 26 issue that physicians contact the AMA regarding their experiences with health plans. Specifically, the article targeted five major topics: health plan decision-making involving treatment and utilization review; reimbursement and capitation rates; due process and appeal rights, including those governing physician deselection from networks; contract gag rules, and hold harmless and indemnity clauses. Also solicited were examples of "positive aspects of health plans that could serve as models for other plans." The Pennsylvania Medical Society has also joined the ranks of those organizations seeking to clarify doctors' problems with "managed care interference." "If you have a story you would like to share that may be convincing to non-physician audiences (legislators, regulators, the media and the general public), we'd like to know about it," the society's journal told readers in its June 1995 issue.

Almost every state medical society gives record of some activity regarding the need for doctors to have greater input into the managed care process. In some instances, the goal is fairly uncomplicated. For example, the December 1994 issue of *Minnesota Medicine* offered a shopping list of risk management issues for doctors

considering MCO participation. But other groups voice a stronger message. In Missouri, the most recent issue of The Green County Medical Society *Bulletin* included an editorial advocating "a system that lets you (physicians), not bureaucrats, make the medical decisions." And some states are going even further. In North Dakota, where managed care is still in its infancy, the state medical association has formed a committee to study the feasibility of a physician-owned plan while a group of Nevada physicians has set up a statewide "managed care medical society."

The *Journal of the Medical Association of Georgia* dedicated its April 1995 issue to managed care issues. Topics addressed included: "Managed Care, Threat or Opportunity?" "Medical Ethics and Managed Care;" "Managed Health Care-Patient Protection or Abuse?" "Pace of Managed Care Leaves Patient Safeguards Behind;" "Why Managed Care Won't Last" and "On the Ethics of Managed Competition," among others. Increasingly, doctors are networking about medical decision-making issues. They have realized that the MCO may want to dictate the rules for providing care - but the courts had tended to hold the doctor accountable for those decisions.

If physicians participate in a process of education and negotiation, the uncertainty engendered by managed care entities may be replaced by a stronger and more workable commitment to quality care and cost-effectiveness. Until recently, the major players in this process of establishing the "rules" for managed care have not included physicians. Judging by the proliferation of physician-targeted information, the time has arrived for doctors to ensure that their concerns about quality, gatekeeping, patient care decisions, appeals processes, reimbursement and deselection are addressed.

Mark Your Calendars!

AMS Fall Workshops

September 28, 1995

CPT & ICD-9 Coding for OB-GYN

September 29, 1995

CPT & ICD-9 Coding for Psychiatry

St. Vincent Infirmary Health Education Center
Little Rock, Arkansas
8:30 a.m. - 4:00 p.m.

*Watch your mail for further details
or call the AMS office at
501-224-8967 or 800-542-1058.*

ETHICAL ISSUES IN MANAGED CARE

Statement of Principles

In June 1994 the AMA's Council on Ethical and Judicial Affairs issued recommendations addressing "Ethical Issues in Managed Care." The essence of these recommendations, which were adopted by the AMA House of Delegates, follows.

1. The duty of patient advocacy is a fundamental element of the physician-patient relationship that should not be altered by the system of health care delivery in which physicians practice. Physicians must continue to place the interests of their patients first.
2. When managed care plans restrict the care that physicians may provide, the following principles should be followed.
 - A. Any broad allocation guidelines that restrict care and choices beyond the normal cost/benefit judgments physicians routinely make should be established at a policy making level so that individual physicians are not asked to engage in ad hoc bedside rationing.
 - B. Physicians must advocate for any care they believe will materially benefit their patients.
 - C. Physicians should be given an active role in allocation processes and should advocate for guidelines that are sensitive to differences among patients. Managed care plans should create structures similar to hospital medical staffs that allow physicians to have meaningful, ongoing input into the plan's development of allocation guidelines.
 - D. Adequate appellate mechanisms for both patients and physicians should be in place to address disputes regarding medically necessary care.
 - E. Managed care plans must adhere to the requirements of informed consent, assuring patients full disclosure of material information, including limitations or restrictions on the benefits package.
 - F. Physicians should continue to promote full disclosure of treatment options to patients, even if the managed care plan does not cover certain options.
 - G. Physicians should only participate in plans that encourage or require care that meets or exceeds minimum professional standards.
3. Financial incentives to physicians are permissible only if they promote the cost-effective delivery of health care and not the withholding of medically necessary care. Financial incentives should be based on quality of care, fully disclosed to patients and calculated according to the performance of a sizable group of physicians rather than on an individual basis.
4. Patients have an individual responsibility to be aware of the benefits and limitations of their health care coverage.

In addition to the recommendations described above, AMA policy supports principles which affirm the physician's professional role and stature. Among them are:

- A. Physicians should receive notice and an opportunity to respond before any adverse actions are taken against them.
- B. Physicians should not be subject to unilateral amendment of contracts.
- C. Physicians should receive actuarial and other information necessary to assess managed care plan performance.
- D. Physicians are entitled to return of withholds unless the withholds are required to maintain plan solvency.

From the American Medical Association

Fundamental Elements of the Patient—Physician Relationship

From ancient times, physicians have recognized that the health and well-being of patients depends upon a collaborative effort between physician and patient. Patients share with physicians the responsibility for their own health care. The patient-physician relationship is of greatest benefit to patients when they bring medical problems to the attention of their physicians in a timely fashion, provide information about their medical condition to the best of their ability, and work with their physicians in a mutually respectful alliance. Physicians can best contribute to this alliance by serving as their patients' advocate and by fostering these rights:

1. The patient has the right to receive information from physicians and to discuss the benefits, risks, and costs of appropriate treatment alternatives. Patients should receive guidance from their physicians as to the optimal course of action. Patients are also entitled to obtain copies or summaries of their medical records, to have their questions answered, to be advised of potential conflicts of interest that their physicians might have, and to receive independent professional opinions.
2. The patient has the right to make decisions regarding the health care that is recommended by his or her physician. Accordingly, patients may accept or refuse any recommended medical treatment.
3. The patient has the right to courtesy, respect, dignity, responsiveness, and timely attention to his or her needs.
4. The patient has the right to confidentiality. The physician should not reveal confidential communications or information without the consent of the patient, unless provided for by law or by the need to protect the welfare of the individual or the public interest.
5. The patient has the right to continuity of health care. The physician has an obligation to cooperate in the coordination of medically indicated care with other health care providers treating the patient. The physician may not discontinue treatment of a patient as long as further treatment is medically indicated, without giving the patient reasonable assistance and sufficient opportunity to make alternative arrangements for care.
6. The patient has a basic right to have available adequate health care. Physicians, along with the rest of society, should continue to work toward this goal. Fulfillment of this right is dependent on society providing resources so that no patient is deprived of necessary care because of an inability to pay for the care. Physicians should continue their traditional assumption of a part of the responsibility for the medical care of those who cannot afford essential health care. Physicians should advocate for patients in dealing with third parties when appropriate.

Report of the Council on Ethical and Judicial Affairs of the American Medical Association. Originally adopted June 1990; updated June 1994.



J. David Talley, M.D.*

Mitchell W. Krucoff, M.D.**

DIAGNOSIS AND TREATMENT OF ACUTE CORONARY ISCHEMIC SYNDROMES: AN UPDATE FOR 1995

INTRODUCTION

This issue of CCU will highlight recent advancement in the diagnosis and treatment of acute ischemic syndromes related to coronary artery disease. We will specifically focus on electrocardiographic and biochemical markers of myocardial ischemia and infarction as well as new antiplatelet and antithrombin medication. Novel dosing schedules of existing thrombolytic agents will also be explored.

WHAT'S NEW IN DIAGNOSIS?

Continuous ST Segment Monitoring¹

The interplay of fixed atheroma, coronary muscular tone, platelet activation and deposition, and thrombus formation in the generation of unstable coronary syndromes has been a large area of recent investigation and advancement. Cycles of plaque rupture, platelet stimulation, coronary spasm, and thrombin formation are common pathways to gradual atheroma development or acute occlusion of a vessel. In this context, the progression of stable angina, ischemia, and infarction should not be viewed individually, but as a spectrum of manifestations of the underlying coronary artery disease.

Prior investigation has noted that continuous monitoring of the ST segment of the electrocardiogram (ECG) may reveal ischemic changes even without symptoms.² Importantly, the total duration of ECG ischemia recorded over 24 hours on ST segment recording is correlated with adverse patient outcomes.³ New microprocessor-assisted digital ECG monitoring now provides continuous monitoring and instantaneous

analysis of all 12 electrocardiographic leads. Graphic display of this data allows rapid recognition of both the qualitative precordial pattern of the "ST fingerprint" and the quantitative activity of that pattern of time (Figure 1).

Biochemical Markers of Myocardial Damage

Since the mid 1960s, measurement of myocardial enzymes in the blood stream has been the method of determining the presence and extent of myocardial damage. Commonly used tests are limited by lack of specificity (aspartate aminotransferase, AST) or delay in serum appearance of the enzyme (lactate dehydrogenase, LDH). The current gold standards, creatine kinase (CK) and the myocardial-specific isoenzyme (CK-MB), are tarnished by lack of diagnostic specificity. The use of newly discovered enzymatic and non-enzymatic markers of myocardial necrosis offer the promise of improving diagnostic sensitivity and specificity of acute myocardial infarction (MI).

Enzymatic Markers

Iso-forms of Creatine Kinase-MB. CK is an intracellular enzyme that catalyzes energy transfer. CK is found in all muscle and certain other tissue including the brain. It consists of two subunits, M and B. There are three combinations of these two subunits: CK-MM (found in muscle), CK-BB (found in the brain), and CK-MB (found in myocardial muscle). The M subunit of CK has a carboxyl terminal lysine amino acid, which when released into the serum, is cleaved by a carboxypeptidase-N to form the electronegative subform, CK-MB₁, CK-MB₁ (in the serum) and CK-MB₂ (in the myocardial muscle) appears within one hour after acute MI (Figure 2). Measurement of the plasma levels of CK-MB₂ and the ratio of MB₂/MB₁ have a specificity

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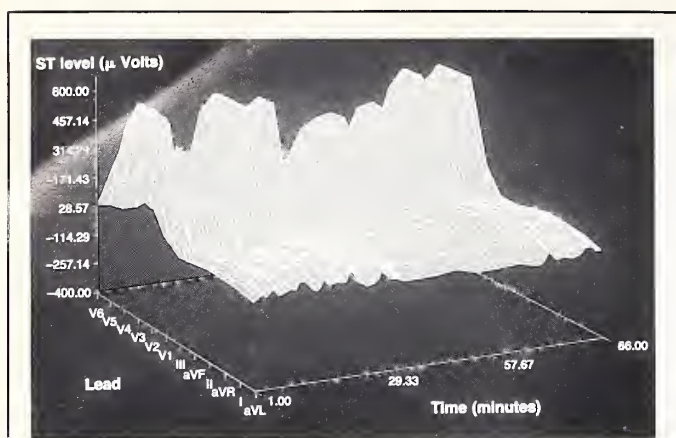


Figure 1: A "ST segment fingerprint" of a patient with an acute myocardial infarction obtained by continuous monitoring of the ST segment. At the time of presentation, there was a dramatic peak of ST segment elevation in the precordial leads. Following the period of elevation, the ST segment elevation returned to the baseline. Periods of recurrent elevation and stabilization follow.

and sensitivity of acute MI of approximately 95%.⁴ Use of this test is reported to refine diagnostic criteria for admission to the coronary care unit by 50 to 70%.⁵

Nonenzymatic Markers in the Cytoplasm

Myoglobin. Myoglobin is a low molecular weight heme-protein found in the cytoplasm of cardiac and skeletal muscle. Due to its small size, it appears quickly in the serum after myocardial necrosis. The ubiquitous nature of the molecule dramatically decreases the specificity and the rapid clearance by the kidneys decreases the sensitivity for acute MI.⁶

Troponin. The Troponin complex is found on the thin filament of the muscle myofibril and consists of three units, C, I, and T. This complex regulates the interaction between actin and myosin. Troponin-C is the calcium binding subunit and is found in skeletal and cardiac tissue and therefore lacks specificity for myocardial injury. Troponin-I is the actomyosin ATPase-inhibiting subunit and Troponin T is the tropomyosin-binding subunit. The cardiac and skeletal muscle forms of Troponin I and T are coded by differing gene sequences that allow for specific identification by monoclonal antibodies.⁶

Cardiac Troponin I and T are not found in the serum of normal patients and therefore are specific markers of acute MI. Troponin I is more specific for cardiac muscle than Troponin T. Both subunits appear in the serum late after myocardial necrosis (four hours) thereby decreasing sensitivity for acute MI.⁷ Elevated levels persist for four to seven days which allow for once-a-day sampling to screen for the presence of cardiac injury.⁸

WHAT'S NEW IN TREATMENT?

Since the last review in the *Journal*⁹, there have been exciting developments in the treatment of acute

MI. Both new drugs and mechanical therapies are recent advancements. The field of interventional pharmacology can best be categorized as agents with targeted inhibition of the platelet, thrombin, and thrombus. Mechanical therapy may be viewed as primary treatment of acute MI with direct balloon angioplasty and adjunctive therapy with intra-aortic balloon counterpulsation.

Interventional Pharmacology

Anti-platelet Agents

7E3. Several new anti-platelet agents have been developed which are specific blockers of the glycoprotein IIb/IIIa receptor on the platelet surface. Inhibition of this receptor blocks platelet aggregation. The monoclonal antibody against the IIb/IIIa receptor, 7E3, abciximab, ReoProTM (Eli Lilly and Co., Indianapolis, IN and Centocor B.V., Leiden, The Netherlands) has recently been released for commercial use for high risk balloon angioplasty. In patients with acute MI, 7E3 decreased adverse clinical outcomes by 83%.¹⁰

Integrelin. A cyclic heptapeptide that has a shorter half life than 7E3, Integrelin (COR Therapeutics, Inc., South San Francisco, CA) has also shown particular promise in the treatment of acute MI.¹¹ In a recently completed phase II trial, Integrelin when used in combination with aspirin, heparin, and rt-PA (100 mg/90 minutes) was shown to give 100% patency of the infarct related artery.¹²

Anti-thrombins

Heparin, the only available anti-thrombin, functions by activating anti-thrombin III, and the active complex of heparin and antithrombin III, inhibits thrombin. There are many inhibitors of this interaction including elevated circulating levels of factor VIII, anti-thrombin III deficiency, obesity, and nitroglycerine. Fluctuating levels of heparin activity account for the narrow therapeutic range. Elevated levels are correlated with hemorrhage and subtherapeutic amounts are associated with recurrent thrombosis.

Hirudin. Hirudin is a direct antithrombin that blocks fibrinogen binding and the conversion of fibrinogen to fibrin. It has a predictable dose response curve, thereby avoiding the peaks and valleys of therapeutic efficacy. A recently completed pilot trial of hirudin compared with heparin in patients with acute MI, found that hirudin decreases the occurrence of death or recurrent MI by more than 50%.¹³ These preliminary findings are currently being evaluated in three large clinical trials: Global Use of Strategies to Open Occluded Coronary Arteries (GUSTO) - IIB, Hirudin for the Improvement of Thrombolysis (HIT) - 3, Thrombolysis and Thrombin Inhibition in Myocardial Infarction (TIMI) - 9.¹⁴

Plasminogen activators

Recombinant tissue plasminogen activator (rt-PA,

Alteplase, Genentech, Inc., South San Francisco, Ca) when used in an accelerated dosing format (100 mg/90 minutes, given as a 15 mg bolus, 0.75 mg/kg given over 30 minutes not to exceed 50 mg, and 0.5 mg/kg over 60 minutes not to exceed 35 mg) improves survival in the vast majority of all patient subsets compared with Streptokinase (SK, 1.5 million units/60 minutes, Kabikinase[®], Pharmacia Adria, Dublin, OH) when given either with subcutaneous or intravenous heparin. It is also superior to a combination regiment of rt-PA and SK.¹⁵ The mechanism of this survival benefit is the rapid velocity of early patency of the occluded coronary artery responsible for the acute MI.¹⁶ The cost to society of the use of rt-PA is on par with currently acceptable medical therapies.¹⁷ The scientific data supporting the use of the 100 mg/90 minute dosing regiment of rt-PA has not only allowed the United States Food and Drug Administration to make the dosing a part of the product insert but also has given rt-PA a superiority claim compared with other plasminogen activators including streptokinase, anistreplase (Eminase[®], APSAC, SmithKline Beecham Pharmaceuticals, Philadelphia, PA), and urokinase (Abbokinase[®], Abbott Laboratories, North Chicago, IL).

Other plasminogen activators currently under evaluation include TNK, a mutant of rt-PA that has increased fibrin specificity and prolonged clearance that allow a bolus injection.¹⁸ Also under evaluation is reteplase that also has a longer half life also allowing for bolus administration.

Mechanical Therapy

Direct Angioplasty

The exact role of direct balloon angioplasty as primary treatment of acute MI is still nebulous. Pilot studies in limited numbers of patients have shown remarkable results compared with rt-PA (100 mg/180 minutes), dutaplaste (Actilyse[®], Boehringer Ingelheim, Research Triangle, NC) and streptokinase. A meta-analysis of all published trials has confirmed the results of the small trials.¹⁹ The primary limiting feature of this form of therapy remains the limited number of facilities that provide the rapid access to the catheterization laboratory, and lack of experienced primary operators and staff. Additional insights into the applicability of this form of therapy will be forthcoming from the results of GUSTO-IIb. This is the largest trial to date (n=1200) to evaluate direct balloon angioplasty compared with aspirin, heparin or hirudin, and rt-PA given in an accelerated dosing format.

Intra-aortic Balloon Counterpulsation

The prophylactic use of intra-aortic balloon counterpulsation has been shown in clinical trials to decrease the need for repeat balloon angioplasty or performance of coronary bypass surgery, and promotes patency of the infarct related artery in patients felt to be at high risk for recurrent ischemia and infarction after acute MI. Use of the device is limited to high risk

patients who have no evidence of significant peripheral vascular disease.²⁰

CONCLUSION

Within the last year there have been remarkable advancements in the diagnosis and treatment of acute MI. Right now, continuous monitoring of the ST segment offers improved recognition of myocardial ischemia before the development of myocardial necrosis. Early detection of myocardial cell death is best detected with the creatine kinase MB₂ isoform. Ambiguous CK-MB₂ patterns or patients who present late after acute MI may be recognized with the use of Troponin I or T levels. For 1995, state of the art pharmacological treatment of acute MI includes targeted therapy at the platelet (aspirin), thrombin (heparin), and thrombus (accelerated rt-PA). Direct balloon angioplasty is reserved for patients who have a contraindication to pharmacological therapy, who fail to reperfuse with thrombolytic therapy, and those at high risk such as those with cardiogenic shock.

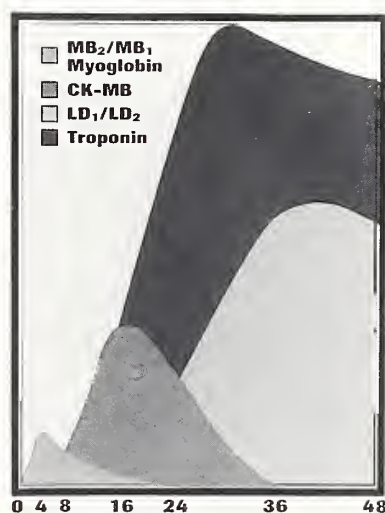


Figure 2: Biochemical markers of acute myocardial infarction. Myoglobin and CK-MB isoforms appear within the first hour of myocardial necrosis, while LDH and Troponin appear later. Abbreviations: CK-MB = creatine kinase - myocardial subunit, LDH = lactate dehydrogenase.

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State Health Watch

Information provided by the Arkansas Department of Health

INFLUENZA VACCINE RECOMMENDATIONS FOR THE 1995-96 SEASON

The following information was excerpted from *The Centers for Disease Control and Prevention, MMWR, vol. 44, No. RR-3*. Influenza vaccine is strongly recommended for any person 6 months of age and older who, because of age or underlying medical condition, is at increased risk for complications of influenza. Health-care workers and others (including household members) in close contact with persons in high-risk groups should also be vaccinated. In addition, influenza vaccine may be administered to any person who wishes to reduce the chance of becoming infected with influenza. The trivalent influenza vaccine prepared for the 1995-96 season will include A/Texas/36/91-like (H1N1), A/Johannesburg/33/94-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens.

Because the 1995-96 vaccine differs from the 1994-95 vaccine, supplies of the 1994-95 vaccine should not be administered to provide protection for the 1995-96 influenza season.

Two doses administered at least 1 month apart may be required for satisfactory antibody responses among previously unvaccinated children less than 9 years of age.

Target Groups for Vaccination Programs

To maximize protection, the groups listed below and their close contacts should be targeted for vaccination programs:

- Persons 65 years of age and older,
- Residents of nursing homes and other chronic-care facilities that house persons of any age with chronic medical conditions,
- Adults and children with chronic disorders of the pulmonary or cardiovascular systems, including children with asthma,
- Adults and children who have required medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes melitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications) and,
- Children and teenagers (6 months to 18 years of

age) who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye syndrome after influenza.

Vaccination of Other Groups

General population - Physicians should administer influenza vaccine to any person who wishes to reduce the likelihood of becoming ill with influenza, who provide community services and students or other persons in institutional settings (e.g., those who reside in dormitories).

Pregnant women - Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season, regardless of the stage of pregnancy. Administration of influenza vaccine is considered safe at any stage of pregnancy.

Persons infected with Human Immunodeficiency Virus (HIV) - Because influenza can result in serious illness and complications, vaccine is a prudent precaution and will result in protective antibody levels in many recipients.

Foreign travelers - Persons preparing to travel to the tropics at any time of the year or to the Southern Hemisphere from April through September should review their influenza vaccination histories. If they were not vaccinated the previous fall or winter, they should consider influenza vaccination before travel.

Persons Who Should Not Be Vaccinated

Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician.

Adults with acute febrile illness usually should not be vaccinated until their symptoms have abated. However, minor illnesses with or without fever should not contraindicate the use of influenza vaccine, particularly among children with mild upper respiratory tract infection or allergic rhinitis.

Side Effects and Adverse Reactions

Respiratory disease after vaccination represents coincidental illness unrelated to influenza vaccination.

The most frequent side effect of vaccination reported by fewer than one third of vaccinees is soreness at the vaccination site that lasts for up to 2 days. In addition, two type of systemic reactions have occurred:

1. Fever, malaise, myalgia and other systemic symptoms occur infrequently and most often affect persons who have had no exposure to the influenza virus antigens in the vaccine (e.g., young children). These reactions begin 6-12 hours after vaccination and can persist for 1 or 2 days.

2. Immediate - presumably allergic - reactions (e.g., hives, angioedema, allergic asthma and systemic anaphylaxis) occur rarely after influenza vaccination. These reactions probably result from hypersensitivity to some vaccine component; the majority of reactions are most likely related to residual egg protein.

Timing of Influenza Activities

The optimal time for organized vaccination campaigns for persons in high-risk groups is usually the period from mid-October through mid-No-

vember. In the United States, influenza activity generally peaks between late December and early March.

A limited supply of influenza vaccine will be available at all health units some time in October.

Influenza vaccine dosage by age group United States, 1995-96 season

Age Group	Product	Dosage	No. of doses	Route
6 - 35 mos.	Split virus only	0.25 mL	1 or 2*	IM
3 - 8 years	Split virus only	0.50 mL	1 or 2*	IM
9 - 12 years	Split virus only	0.50 mL	1	IM
>12 years	Whole or split virus	0.50 mL	1	IM

* Two doses administered at least one month apart are recommended for children < 9 years of age who are receiving influenza vaccine for the first time.

FREE VACCINE PROVIDED THROUGH THE VACCINES FOR CHILDREN PROGRAM

Physicians interested in obtaining free vaccine for patients ages birth through 18 years who are uninsured, enrolled in Medicaid, American Indian or Alaskan Native may participate in the Vaccines for Children Program (VFC). This program is administered through the Arkansas Department of Health with funding from the Centers for Disease Control and Prevention (CDC).

Medicaid will only reimburse for the administration of the vaccines that are covered under Arkansas VFC but not for the vaccine itself. The Medicaid reimbursement rate as of July 1, 1995 is \$8.69. The vaccines

covered under the Arkansas VFC program are DTP, DTP-HIB combined, DT, Td adult, HIB, OPV, EIPV, MMR, and Hepatitis B for the pediatric population. Vaccines other than the ones listed will be reimbursed at the standard Medicaid rate for Medicaid recipients only. The current fee cap is \$13.65 for the administration of the covered vaccines.

Information packets and enrollment forms for the VFC program may be obtained by calling the Physician/Provider Line of the Arkansas Department of Health Immunization Division at 1-800-574-4040.

VACCINE INFORMATION STATEMENTS

The Public Health Services Act, Section 2126, which became effective October 1, 1994, requires all health care providers who administer any vaccine containing diphtheria, tetanus, pertussis, measles, mumps, rubella or polio vaccine to provide a copy of the current relevant vaccine information materials prior to administration of the vaccine. These materials, referred to

as vaccine information statements (VIS) must be presented to any adult that will receive the vaccine or the legal representative of any child or ward.

Under the new federal guidelines covering the vaccines noted above, it is no longer required to obtain the signature of the parent or legal guardian for consent. However, Arkansas Statutes do require consent

which is defined as "orally or otherwise." It is also necessary to ensure that a record of providing the VIS's exist, therefore providers will need to make a notation in each patient's medical record indicating that the VIS's were provided at the time of vaccination. The current material, dated June 10, 1994, along with the notation of the antigen as indicated on the back of the new form is considered sufficient documentation (i.e., DTP 6/10/94 or MMR 6/10/94, etc.).

Camera ready copies of the new single, two-sided VIS sheets for diphtheria, tetanus and pertussis; measles, mumps and rubella; polio; and tetanus/diphtheria (age 7 or more) are available from the Arkansas Department of Health. The packet containing the VIS's has additional questions and answers along with copies

of the federal registry relating to the PHS Act.

The Arkansas Department of Health has vaccine information materials for hepatitis b (dated May 27, 1992) and haemophilus influenzae type b (dated June 6, 1991). These are considered current as they have not been revised by CDC. Foreign language copies may also be requested for most known languages. Most of the foreign language vaccine information materials are the pamphlet format, as Spanish is the only language currently revised into the single, two-sided sheet format.

To obtain the VIS packet or other information, call the Physician/Provider Line of the Arkansas Department of Health Immunization Division at 1-800-574-4040.

Reported Cases of Selected Reportable Diseases in Arkansas Profile for May 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases May 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	10	50	48	46	187	130
Giardiasis	5	39	35	45	126	150
Shigellosis	15	50	65	44	193	201
Salmonellosis	24	70	82	88	534	402
Hepatitis A	33	115	39	32	253	74
Hepatitis B	1	23	21	42	60	90
HIB	0	3	2	8	6	8
Meningococcal Infections	2	20	31	18	55	27
Viral Meningitis	0	4	18	16	62	79
Lyme Disease	0	2	8	5	15	8
Rocky Mountain Spotted Fever	2	9	4	2	18	17
Tularemia	4	6	10	19	23	36
Measles	0	2	1	0	5	0
Mumps	0	3	4	7	7	10
Rubella	0	0	0	0	0	0
Legionellosis	0	1	5	4	16	6
Pertussis	1	7	19	5	33	17
Tuberculosis	18	107	86	73	264	209

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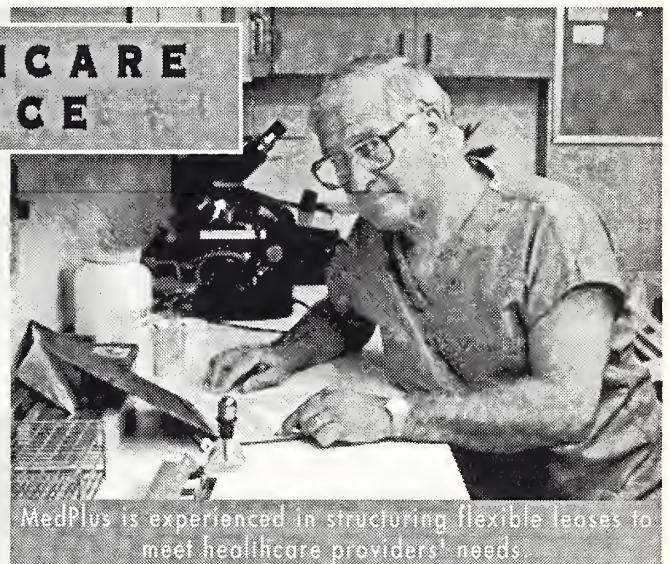
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1983-1995

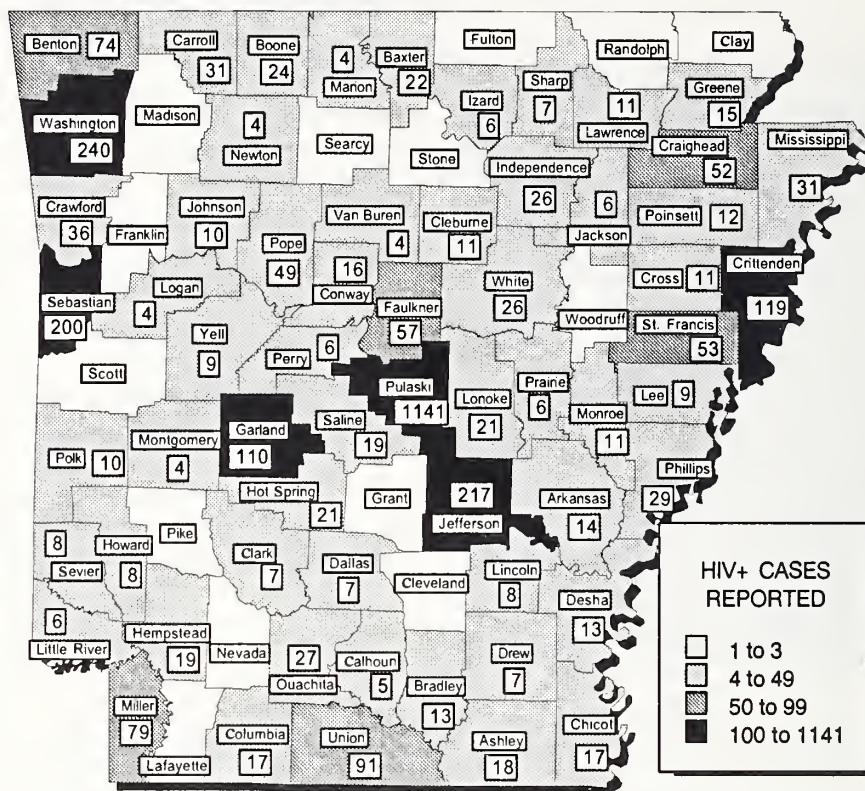
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



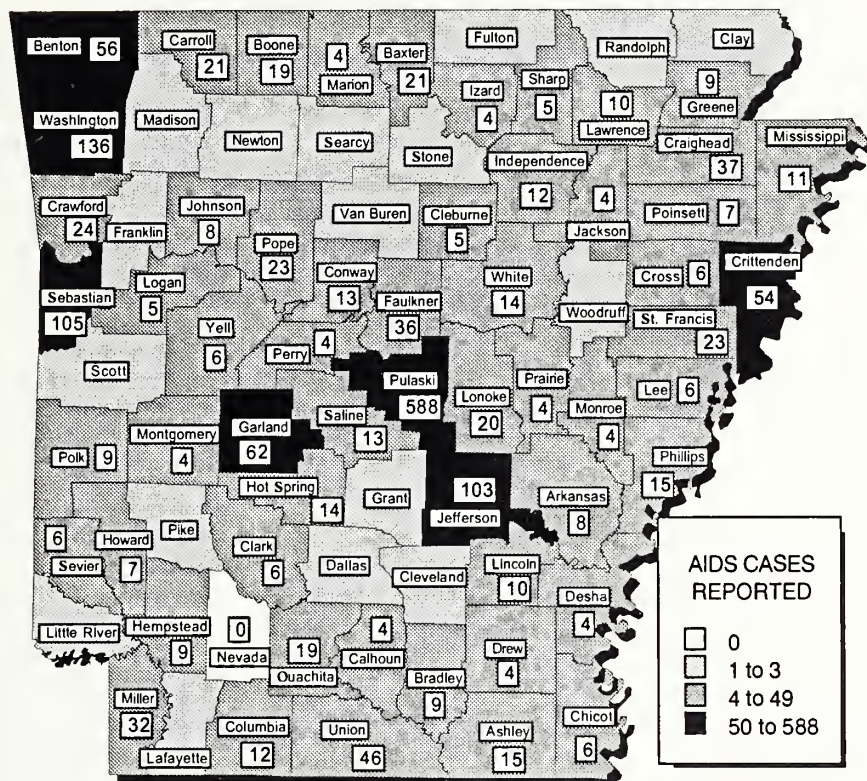
County of residence at the time of test for the 3,206 Arkansans reported to be HIV+. (6/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	173	2,660	83
	Female	8	26	37	68	85	81	94	90	57	546	17
AGE	<5	1	1	2	8	13	6	3	7	1	42	1
	5-12	0	1	1	5	1	2	1	0	0	11	0
	13-19	0	7	8	14	19	25	11	22	5	111	4
	20-29	33	110	123	183	149	156	175	145	73	1,147	36
	30-39	44	86	104	196	208	179	168	171	93	1,249	39
	40-49	22	25	35	56	70	67	65	77	37	454	14
	>49	8	6	11	17	22	38	23	35	21	181	6
RACE	White	87	170	174	328	298	291	277	258	148	2,031	63
	Black	21	69	106	151	184	173	163	183	76	1,126	35
	Other/Unknown	0	2	5	2	3	9	6	16	6	49	2
RISK	Male/Male Sex	64	137	140	243	245	260	241	226	59	1,615	51
	Injection Drug User (IDU)	13	30	48	73	96	75	64	71	24	494	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	10	221	7
	Heterosexual	5	25	26	60	65	68	100	87	25	461	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	2	42	1
	Undetermined	1	20	35	41	23	12	9	38	109	288	9
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	230	3,206	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995



Of the 3,206 Arkansans reported to be HIV+, 1,762 have been diagnosed with AIDS. (6/12/95)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	120	1,537	87
	Female	5	6	10	20	25	35	64	42	18	225	13
AGE	<5	0	1	1	6	6	3	2	1	1	21	1
	5-12	0	1	0	1	1	0	1	0	0	4	0
	13-19	0	0	0	4	3	2	4	3	0	16	1
	20-29	31	27	24	55	57	81	110	67	29	481	27
	30-39	39	36	41	78	80	128	178	133	61	774	44
	40-49	15	10	7	35	41	52	78	61	29	328	19
	>49	5	8	7	11	13	19	27	30	18	138	8
RACE	White	74	61	58	141	134	206	275	190	91	1,230	70
	Black	16	20	21	47	66	75	121	102	45	513	29
	Other/Unknown	0	2	1	2	1	4	4	3	2	19	1
RISK	Male/Male Sex	55	59	50	122	120	182	237	162	71	1,058	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	19	254	15
	Male/Male Sex & IDU	16	6	6	18	17	21	26	23	5	138	8
	Heterosexual	5	3	7	11	12	24	52	40	11	165	9
	Transfusion	2	7	3	7	11	3	2	4	2	41	2
	Perinatal	0	1	1	6	6	3	3	1	1	22	1
	Hemophiliac	0	1	1	5	5	4	5	6	3	30	2
	Undetermined	0	2	1	3	1	3	5	13	26	54	3
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	138	1,762	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

BATESVILLE

Cummins, Thomas Hunt, Internal Medicine. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995. Board pending.

Jeffrey, Jay Raleigh, General & Vascular Surgery. Medical Education, University of Louisville, 1990. Internship/Residency, State University of New York School of Medicine, Buffalo, 1991/1995.

BENTON

Jones, Robert Eugene, General Practice. Medical Education, UAMS, 1951. Internship, St. Vincent Infirmary, 1952.

Menard, John Carlos, Internal Medicine and Pediatrics. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995. Board eligible.

CAMDEN

Alhariri, Mirfat, Internal Medicine/Hematology/Oncology. Medical Education, Aleppo University, Aleppo, Syria, 1984. Internship/Residency, St. Barnabas Hospital, New York, 1990/1992. Board certified.

DOVER

Rickey, Jean Mauch, Family Practice. Medical Education, University of Oklahoma School of Medicine, 1967. Internship, Cincinnati General Hospital, 1968. Board certified.

EL DORADO

Reis, Ivory A., Ophthalmology. Medical Education, UAMS, 1989. Internship/Residency, UAMS, 1991/1995.

Sheppard, Julius K., Orthopedic Surgery. Medical Education, UAMS, 1967. Internship/Residency, St. Luke's Hospital, 1968/1972. Board certified.

FAYETTEVILLE

Lloyd, Richard Alan, Psychiatry. Medical Education, Stanford University School of Medicine, Palo Alto, Calif., 1966. Internship, Stanford Medical Center, 1967. Residency, University of California, Los Angeles, Neuropsychiatric Institute, 1971. Board certified.

Mitchell Jr., Banford Raye, Orthopedics. Medical Education, University of Tennessee, Memphis, 1989. Internship, University of Tennessee, 1990. Residency/Fellowship, Campbell Clinic, 1994/1995.

FORT SMITH

Elian Samir A., Cardiology. Medical Education, University of Jordan School of Medicine, Amman - Jordan, 1983. Internship, Prince George's Hospital,

Cheverly, Maryland, 1989 and West Virginia University Hospital, 1992. Residency, University of Missouri at Kansas City, 1995. Board certified.

Horan, Michelle M., Family Practice. Medical Education, University of Texas Medical School, Houston, 1992. Internship/Residency, AHEC, Fort Smith, 1993/1995. Board pending.

Lewis, George Luke, Dermatology. Medical Education, University of Texas Medical Branch, Galveston, 1987. Internship/Residency, Scott and White Memorial Hospital, Temple, Texas, 1988/1990. Additional residency, Texas Tech University HSC, Lubbock, Texas, 1995. Board certified.

Osborn, Daniel Roland, Ophthalmology. Medical Education, Indiana University School of Medicine, Indianapolis, 1991. Internship, Methodist Hospital of Indianapolis, 1992. Residency, Indiana University Dept. of Ophthalmology, 1995. Board eligible.

Sheikha, Mouhammed K., Internal Medicine. Medical Education, Damascus University Medical School, Damascus, Syria, 1986. Internship, Residency, Columbus Hospital, Chicago, 1993/1995.

Tisdale, Bernard Alvan, Radiation Oncology. Medical Education, University of Virginia, Charlottesville, 1985. Internship, University of Virginia, 1986. Residency, University of Virginia, 1988 and University of Louisville, 1995. Board certified.

HEBER SPRINGS

Carey, Victor Frank, Urology. Medical Education, Tulane University, New Orleans, 1946. Internship, North Louisiana Sanitarium, Shreveport, 1947. Residency, Charity Hospital, Shreveport, 1953. Board certified.

HELENA

Hall, Scott Alan, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, AHEC-N.E., 1993/1995. Board certified.

HOT SPRINGS

Watermann, Eugene, Psychiatry. Medical Education, University of Texas Southwestern Medical School, Dallas, 1953. Internship, Parkland Hospital, Dallas, 1954. Residency, Spring Grove State Hospital, Maryland, 1959 and The Psychiatric Institute of the University of Maryland, 1960.

JONESBORO

Yoser, Seth Leigh, Ophthalmology. Medical Education, University of California School of Medicine, Los Angeles, 1988. Internship, Cedars Sinai Medical Center, 1989. Residency, Illinois Eye & Ear Infirmary, Chicago, 1993. Board certified.

LITTLE ROCK

Blair, Susan D., Ophthalmology. Medical Education, UAMS, 1989. Internship, UAMS, 1990. Residency, Georgetown University, Washington, D.C., 1993. Board eligible.

Carrico, John David, Ophthalmology. Medical Education, UAMS, 1963. Internship, Arkansas Baptist Hospital, 1964. Residency, Tulane University, New Orleans, 1969.

Florez, James Patrick, Pulmonary/Internal Medicine. Medical Education, University of Kansas School of Medicine, Kansas City, 1973. Internship/Residency, University of Kansas School of Medicine, 1974/1976. Board certified.

Guevara, John C., Anesthesiology. Medical Education, UCLA School of Medicine, Los Angeles, 1987. Internship/Residency, UCLA, 1988/1991. Board certified.

Hopkins, Karmen, Family Practice. Medical Education, Texas Tech University School of Medicine, Lubbock, 1983. Internship/Residency, AHEC, Pine Bluff, 1984/1986. Board certified.

Hughes, Laurie O., Pediatric Orthopedic Surgery. Medical Education, University of Texas Medical Branch at Galveston, 1988. Internship/Residency, UAMS, 1989/1993.

Lipsmeyer, Eleanor Ann, Rheumatology. Medical Education, UAMS, 1962. Internship, UAMS, 1963/1966. Board certified.

Maes, LouAnn Young, Pathology/Microbiology. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995.

McMahon, Robert M., Gastroenterology. Medical Education, Washington University, St. Louis, Missouri, 1989. Internship/Residency, Jewish Hospital of Washington University, 1990/1992. Fellowship, UAMS, 1995. Board eligible.

Moran, Kevin M., Orthopedic Surgery. Medical Education, University of Texas Medical School, Houston, 1990. Internship/Residency, UAMS, 1991/1995.

Nichols II, Roger D., Radiology. Medical Education, University of Iowa College of Medicine, Iowa City, 1989. Internship/Residency, University of Nebraska Medical Center, 1990/1994. Board certified.

Rahman, Holly Elizabeth, Pediatric. Medical Education, UAMS, 1991. Internship/Residency, Arkansas Children's Hospital, 1992/1994. Board pending.

Rapp, Richard J., Endocrinology & Metabolism. Medical Education, Free University of Brussels, Belgium, 1981. Internship, Albany Medical College, 1982. Residency, Albany Medical Center Hospital, 1986. Board certified.

Schmidt, David Allan, Emergency Medicine. Medical Education, UAMS, 1985. Internship, UAMS, 1986.

Smith Jr., Vestal B., Physical Medicine & Rehabilitation. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1992. Board eligible.

Trussell, Anne Rowland, Internal Medicine. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995. Board eligible.

Van Hemert, Rudy L., Radiology. Medical Education, University of New Mexico, Albuquerque, 1989. Residency/Fellowship, UAMS, 1993/1995. Board certified.

Yaseen, Mohammad, Pediatric Gastroenterology. Medical Education, Punjab Medical College, Faisalabad, Pakistan, 1980. Internship/Residency, Western Reserve Care System, 1990/1992. Board certified.

Yazdani, Aijaz Ahmed, Internal Medicine (Pulmonary Medicine). Medical Education, Liaquat Medical College, Jamshoro, Hyderabad, (Sindh) Pakistan, 1978. Internship/Residency, UAMS, 1994/1995.

MOUNTAIN HOME

McBride, Anthony Duane, Orthopedic/Spine. Medical Education, Louisiana State University Medical Center, Shreveport, 1988. Internship/Residency, Louisiana State University Medical Center, 1990/1994. Fellowship, Texas Back Institute, 1995. Board eligible.

MOUNTAIN VIEW

Carroll, Barry Scott, Family Medicine. Medical Education, UAMS, 1992. Internship/Residency, AHEC, Jonesboro, 1993/1995. Board pending.

NORTH LITTLE ROCK

Calkins Jr., Joe B., Cardiology. Medical Education, Medical College of Virginia, Richmond, 1987. Internship/Residency, UAMS, 1988/1990. Fellowship, The George Washington University and UAMS, 1995. Board certified, internal medicine. Board eligible, cardiology.

PINE BLUFF

Baho, Haysam, Pediatrics. Medical Education, Aleppo University Medical School, Aleppo, Syria, 1990. Internship/Residency, University of Tennessee at Memphis, 1992/1994.

ROGERS

Chitwood, G. Glen, Radiology. Medical Education, UAMS, 1977. Residency, University of Oklahoma, Oklahoma City, 1981. Board certified.

Haney, Rondall Kevin, Radiology. Medical Education, UAMS, 1991. Residency, University of Texas Medical Branch, 1995. Board certified.

RUSSELLVILLE

Cunningham, James A., Surgery. Medical Education, New York Medical College, Valhalla, New York, 1980. Internship/Residency, Walter Reed AMC, 1981/1986. Board certified.

McCraw Barry William, Pediatrics. Medical Education, University of Mississippi School of Medicine, Jackson, 1983. Internship/Residency, University of Alabama, Birmingham, 1984/1986. Board certified.

VAN BUREN

Silver, Danny, Emergency Medicine. Medical Education, University of North Carolina School of Medicine at Chapel Hill, 1991. Internship/Residency, Richland Memorial Hospital & University of South Carolina, 1992/1994. Board certified.

OUT OF STATE

Economides, Nicholas, Plastic & Reconstructive Surgery. Medical Education, University of Athens Medical School, Athens, Greece, 1973. Internship, Baptist Memorial Hospital, Memphis, 1975. Residency, Baptist Memorial Hospital, 1979 and University of Tennessee, 1981. Board certified.

RESIDENTS

Alfano, Thomas Gene, Anesthesia. Medical Education, University of Texas Health Science Center, San Antonio, 1995. Internship/Residency, UAMS.

Davis, Marc Jason, Family Practice. Medical Education, Oklahoma State University College of Osteopathic Medicine, Tulsa, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Dunn, James R., Family Practice. Medical Education, Oklahoma State University College of Osteopathic Medicine, Tulsa, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Guyer, Michael L., Family Medicine. Medical Education, UAMS, 1995.

Hale, Arthur Edwin, Family Practice. Medical Education, University of Kansas School of Medicine, Kansas City, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Hamby, Jeffrey Duane, Family Practice. Medical Education, UAMS, 1995. Internship/Residency, AHEC, Fort Smith.

Hronas, Theodore Ned, Radiology. Medical Education, UAMS, 1994. Internship, Baylor University Medical Center, Dallas, Texas, 1995. Residency, UAMS.

Karas, Dean E., Family Practice. Medical Education, University of Illinois, Chicago, 1995. Residency, AHEC, Fort Smith.

Kirkland, Allan K., Family Practice. Medical Education, University of Miami School of Medicine, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Kuykendall, Margaret Wood, Cardiology. Medical Education, UAMS, 1989. Internship/Residency, 1990/1992. Fellowship, UAMS.

Leek, Grif Alan. Medical Education, Louisiana State University Medical Center at New Orleans, 1995. Internship/Residency, UAMS.

Lowther, Laura Marie, Pathology. Medical Education, Louisiana State University Medical Center, Shreveport, 1991. Internship, UAMS, 1992. Residency, UAMS.

Margaret, Heather. Medical Education, Medical College of Pennsylvania, Philadelphia, 1995. Internship, AHEC, Fort Smith.

Meyer, Christopher Mark, Family Practice. Medical Education, University of Oklahoma, Tulsa, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Minton, Bryan H., Family Practice. Medical Education, UAMS, 1995. Internship, Northwest Arkansas Family Practice Residency, Fayetteville.

Parvin, Gregory Alan, Pediatrics. Medical Education, University of Mississippi School of Medicine, Jackson, 1995. Internship, UAMS.

Phomakay, Von. Medical Education, Oklahoma State University College of Medicine, Tulsa, 1994. Internship, AHEC, Fort Smith.

Ramsey, James Randall, Orthopedic Surgery. Medical Education, University of Mississippi Medical Center, Jackson, 1995. Internship/Residency, UAMS.

Rucker, Gari Mills, Pediatrics. Medical Education, UAMS, 1993. Internship/Residency, Earl K. Long, Baton Rouge, Louisiana.

Vanderpool, R. Douglas, Urology. Medical Education, UAMS, 1990. Internship, UAMS, 1991. Residency, UAMS.

Ware, Gerald Thomas, Ophthalmology. Medical Education, UAMS, 1995. Internship, UAMS. Residency, University of Tennessee at Memphis.

William Edward Viner, OB/GYN. Medical Education, Louisiana State University School of Medicine, 1995. Internship, UAMS.

Wilson, Cynthia R., Internal Medicine-Pediatrics. Medical Education, UAMS, 1993. Internship, UAMS, 1995.

PRIMARY CARE PHYSICIANS

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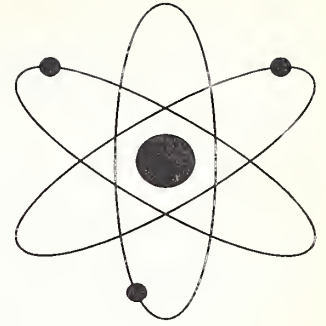
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Radiological Case of the Month



Kenneth V. Robbins, M.D.
M. Bruce Sanderson, M.D.
Steven R. Nokes, M.D.

History:

A 29-year-old-female presented with a long term history of intermittent left leg swelling exacerbated with activity. Over the past month, the patient has had worsening of symptoms and was referred for lower extremity venous doppler which was normal. An inferior venacavogram was subsequently performed (Figures 1 & 2).

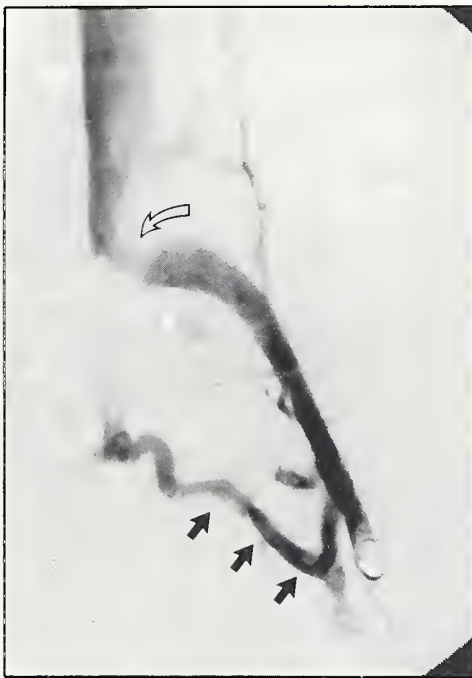


Figure 1: Pelvic venogram



Figure 2: Simultaneous pelvic arteriogram and venogram.

Findings:

The pelvic venogram (Figure 1) shows extrinsic compression of the left common iliac vein at the ilio caval junction (open arrow). Additionally, there is dilatation of the common iliac vein proximal to the point of compression and collateralization to the right iliac system (black arrows). A pressure gradient of 3mm Hg was measured across the compressed area.

Figure 2 shows the relationship of the right common iliac artery and the left common iliac vein with a simultaneous pelvic arteriogram and left common iliac venogram.

May-Thurner Syndrome

Discussion:

The obstruction of the left common iliac vein by the pressure of the anteriorly positioned right common iliac artery with intimal changes was first described by May and Thurner. The iliac compression syndrome (May-Thurner) usually affects young women. Over time, this compression can cause venous obstruction manifested venographically by dilatation of the common iliac vein immediately proximal to the point of compression, stasis of flow, collateralization to the right iliac system and associated thrombosis.

The iliac compression syndrome has three stages. Asymptomatic compression at the left ilio caval confluence without intrinsic changes or collaterals is a common venographic finding. In the event of progression, the second stage is characterized by the presence of intraluminal filling defects (spurs), and the third stage is characterized by iliofemoral thrombosis. The intraluminal spurs are adhesions of endothelial origin thought to represent a response to the chronic irritation caused by repeated compression of the vein between the pulsating artery and lumbar spine. Three types of adhesions are described: lateral spur, central spur, and diaphragm with perforations.

The diagnosis is made on the basis of the characteristic venographic findings and the presence of a pressure gradient of greater than 2mm Hg at rest or 3mm Hg during exercise. It is important to recognize that chronic left leg edema may be due to the May-Thurner Syndrome and is remediable by surgery. Surgical treatment involves total repair or a venous bypass crossover graft between both long saphenous veins.

References:

1. Ferris EJ, Lim WN, Smith PL, Casali R: May-Thurner Syndrome, *Radiology* 147:29, 1983.
2. Kim D, Orron DE: *Peripheral Vascular Imaging and Intervention*. Mosby-Year Book, Inc., 1992

Contributor: Kenneth V. Robbins, M.D. is affiliated with Radiology Consultants in Little Rock.

Contributor: M. Bruce Sanderson, M.D. is in private practice in Little Rock.

Editor: Steven R. Nokes, M.D. is affiliated with Radiology Consultants in Little Rock.

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Medicine in the News

Health Care Access Foundation

As of July 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 12,593 medically indigent persons, received 17,751 applications and enrolled 35,501 persons. This program has 1,689 volunteer health care providers including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

News on Smoking

Reprinted in part from the ASH Smoking and Health Review. ASH is a national nonprofit, organization concerned with the problems and the rights of nonsmokers.

1. Mothers' smoking causes the deaths of 5,600 babies and 115,000 miscarriages in the U.S. each year.

In addition, smoking by mothers causes 53,000 low-birth-rate babies a year and 22,000 newborns who require intensive care at birth. Approximately 18% of pregnant women smoke.

2. Workplaces: 87% of workplaces in the U.S. regulate smoking in some manner; 34% are completely smokefree indoors; and 25% allow smoking only in a separately ventilated smoking lounge.

3. The estimated cost of tobacco use to the global economy is \$200 billion. Smoking kills an estimated 3 million adults each year, a figure expected to reach 10 million annually by 2020.

4. Bad Conscience: An ethical Boston public relations consultant recently backed out of verbal agreement to work with Philip Morris after much soul searching and "several sleepless nights."



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AMS Newsmakers

Dr. Les Anderson, of Lonoke, has been named as one of 10 finalist for the national "Family Doctor of the Year" Award. The recipient will be announced in September at the AAFP's Annual Scientific Assembly in Anaheim, California.

Dr. Roger Bise, a plastic surgeon associated with Holt-Krock Clinic and a fellow of the American College of Surgeons, recently visited the Honduras with the volunteer organization Surgical and Medical Assistance Relief Teams to perform operations on as many patients as possible. Patients consisted mostly of children with cleft lip and palate deformities.

Dr. Raymond Bowman, of El Dorado, was appointed to the state Board of Health by Gov. Jim Guy Tucker.

Dr. William E. Golden, director of the Division of General Internal Medicine at UAMS and principal clinical coordinator for the Arkansas Foundation for Medical Care, has been named chairman of the American Medical Association's Council on Medical Education.

Dr. Morriss Henry, a Fayetteville ophthalmologist, received a Distinguished Service Award from UAMS for his contributions to the college's educational system. The award is the highest honor presented by the college to a non-student, according to Richard Wheeler, associate dean. First presented in 1962, the award is given to individuals who have made outstanding educational, service oriented or patient care related contributions.

Dr. Hugo Jasin, director of the division of rheumatology and clinical immunology and professor of medicine at the University of Arkansas for Medical Sciences, has been elected president of the Pan American League of Associations for Rheumatology.

Dr. Charles E. "Pete" Kemp, a Jonesboro physician, was one of two recipients of the UAMS Distinguished Alumnus Award. In a letter nominating Kemp for the award, Gov. Jim Guy Tucker said, "Dr. Kemp's concern for the health and well-being of our state's children goes far beyond his personal practice."

Dr. Richard R. Owen Jr., staff psychiatrist at John L. McClellan Memorial Veterans Hospital in Little Rock, was recipient of the Junior Faculty Development Award from the Association of Academic Psychiatry. He is one of eight young psychiatrists in the United States recognized for commitment to and skills in teaching psychiatry.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of July are as follows:

James Henry Arkins	Bentonville
Lindy Book	Little Rock
Paul Wayne Davis	Pine Bluff
Curtis Don Greenway	Little Rock
Scott Bennett Harter	Little Rock
Curtis L. Hedberg	Springdale
Albert D. MacDade	Fort Smith
Joseph Stanley Murphy	Little Rock
Kenneth Opie New	Russellville
George T. Schroeder	Little Rock
Sidney Wayne Tate	Searcy
Atiya Naheed Waheed	Pine Bluff


Dr. Ronald E. Revard, of Bentonville, was named Chief of Staff at Bates Medical Center. The two-year appointment became effective July 1.

Dr. Carl Williams, of Fort Smith, recently attended a seminar on advanced peripheral vascular intervention conducted by Dr. Gerald Dorros of the Dorros-Feuer Foundation. The treatment of blocked arteries and veins by means of balloon angioplasties as a way of eliminating the need for surgery was the topic of the seminar.

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In Memoriam

Joseph F. Gartman, M.D.

Dr. Joseph F. Gartman, of Carlisle, died Monday, July 3, 1995. He was 72.

He was preceded in death by two daughters, Jodel Pitts and Paula Gartman. He is survived by his wife, Glyndell McClung Gartman; daughter, Martha Gartman Bailey of Sheridan; two brothers, Howard Gartman and Conrad Gartman of Sheridan; three sisters, Hazel Crouse and Marie Lumsden of Sheridan, Mildred Huggins of Mt. Pleasant, Texas; grandchildren, Gart Pitts, Kerry Pitts, Matthew Bailey and Glenn Bailey.

Vida Hildreth Gordon, M.D.

Dr. Vida Hildreth Gordon, of Little Rock, died Sunday, July 9, 1995. She was 88.

Survivors include one sister, Mary G. Harvey of Little Rock; one brother, Kingsley Gordon of Coral Gables, Florida; and three nieces, Wendy Jones, Jacqueline Gordon and Judy Jaroszewski all of Florida. She was preceded in death by a brother, Irvin Gordon and a sister, Thalma Gordon.

Douglas Walter Parker Jr., M.D.

Dr. Douglas Walter Parker Jr., of Fort Smith, died Tuesday, June 20, 1995. He was 46.

Survivors include his wife, Melissa, one daughter, Ashley, and one son, Brandon, all of the home; one foster-son, Joseph Lumbert of Ft. Smith; parents, Doug and Loretta Parker of Ft. Smith; one brother, Kyle Parker of Ft. Smith; and maternal grandmother, Velma Yocum of Morrilton.

F. E. Shearer, M.D.

Dr. F. E. Shearer, of Alma, died Thursday, June 29, 1995. He was 83.

He is survived by his wife, Hazel; three sons, Edmund C. Shearer, Ph.D. of Hays, Kansas, James E. Shearer, D.V.M. of Paris and William L. Shearer of Alma; two sisters, Pauline Cole of Glasgow, Kentucky and Sybil Wilson of Live Oak, Florida; a brother, James A. Shearer of College Grove, Tennessee; and seven grandchildren.

Things To Come

August 28-31

Current Concepts in Primary Care Cardiology. Hyatt Regency Lake Tahoe, Incline Village, Nevada. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 15 - 16

Surgical Review of Upper Gastrointestinal and Endocrine Diseases. David Grant Medical Center, Fairfield, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 16

Benign Essential Blepharospasm - 13th Annual International Conference & Scientific Symposium. Red Lion Hotel, Sacramento, California. Sponsored by Office of Continuing Medical Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

September 30

Cancer Symposium. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Education, Washington University School of Medicine. For more information, call (800) 325-9862.

September 30 - October 1

7th Annual Ultrasound Update: 1995. Red Lion Hotel, Sacramento, California. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

October 5 - 7

Contemporary Cardiothoracic Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

October 8 - 12

Medical Oncology Board Review Course. The Ritz-Carlton Pentagon City, Arlington, VA. Sponsored by the Office of Continuing Medical Education, The George Washington University Medical Center. For more information, call (202) 994-4285.

October 13 - 14

MESA-ACEP Business of Emergency Medicine Seminar. Jackson Hole, Wyoming. Sponsored by the Medical Emergency Service Associates. For more information, call (708) 925-8300.

October 13 - 15

"Advances in Sonography," - a fourth annual post-graduate educational course. Sheraton Chicago Hotel and Towers, Chicago, Illinois. Sponsored by the Center for Bio-Medical Communication. Designated for 17.75 credit hours of Category 1 of the Physician's Recognition Award. For more information, call (201) 385-8080.

October 26 - 27

FREE - "Molecular Medicine: Cytokines in Health and Disease" Symposium. The University of Texas Southwestern Medical Center at Dallas. Sponsored by the Southwestern Medical Foundation. For more information, call (214) 648-3599.

November 3-5

7th Annual Infectious Disease Review Course for the Practicing Physician. Hyatt Regency Bethesda in Bethesda, Maryland. Sponsored by The Society of Radiologists in Ultrasound. For more information, call (201) 385-8080.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

December 15 - 18

Ethical Issues in the Care of Terminally Ill and Dying Patients. The Rolling Hills Hotel & Golf Resort, Ft. Lauderdale, FL. Sponsored by the CEREC Center of Southeast Florida. For more information, call (305) 424-9304.

January 12 - 13, 1996

What's New In General Surgery - 18th Annual Postgraduate Course. Hyatt Regency, Sacramento, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

Keeping Up

October 26 & 27, 1995

University of Arkansas for Medical Sciences
Department of OB/GYN
**Arkansas High Risk Pregnancy Program's
Twelfth Annual Conference on Perinatal Care**
Excelsior Hotel
Special Guests & Informative Topics including Early
Discharge/Home Care • PROM • Diabetes
For more information, call (501) 661-7962

Update in Primary Care Geriatrics

Washington Regional Medical Center
CME Activity Dates:

Saturday, September 9 - 8 a.m. - 10:30 a.m.

Saturday, October 7 - 8 a.m. - 10:30 a.m.

Saturday, November 11 - 8 a.m. - 10:30 a.m.

*These dates coincide with the Fayetteville
Razorback football games. Tickets for the games can
be obtained by calling 1-800-982-HOGS (4647).*

For more information about the conference,
call (501) 442-1823.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category 1 of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

Medical Grand Rounds, Thursdays, 12:00 noon, Conference Room, Bldg. 4

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Joint Tumor Conference, 1st Wednesday, 12:00 noon, CARTI Auditorium. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

GI Conference, 4th Friday, 11:30 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

EKG Conference, Mondays, noon, VAMC, room 5C114

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:15 p.m., Radiology Conference Room at UAMS

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room

Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GRECC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Behavioral Sciences Conference, 1st & 4th Friday, 12:30 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:30 p.m., Warner Brown Hospital
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:30 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:30 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, AHEC - South Arkansas. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Pediatric Conference, 3rd Friday, 12:30 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:30 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:30 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:30 p.m., AHEC - South Arkansas

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Fridays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Thursdays, 7:30 a.m., Washington Regional Medical Center
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided. *

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided. *

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn

Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Orthopedic Case Conference, June 23, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

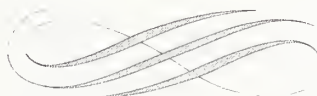
Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital

Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center

Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital



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Advertising Agencies in italics

American Physicians Insurance Exchange	inside front
Care Network	113
<i>The Alan Rothman Company, Inc.</i>	
Central Arkansas Rehabilitation Hospital	back cover
Freemyer Collection System	142
Little Rock VA Medical Center	140
Med Plus Leasing	135
<i>Creative Advantage</i>	
Medical Arts Laboratory	117
Mississippi Baptist Medical Center	121
<i>Godwin Group</i>	
Riverside Motors, Inc.	118
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	inside back
<i>Strategic Marketing</i>	
Spectrum Health Care Services	144
State Volunteer Mutual Insurance Company	114
<i>The Maryland Group</i>	
U.S. Air Force	143
<i>BJK&E Specialized Advertising</i>	
U.S. Army Reserve	135
<i>Young & Rubicam</i>	



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MANUSCRIPT STYLE

Author information should include titles, degrees, and any hospital or university appointments of the author(s). All scientific manuscripts must include an abstract of not more than 100 words. The abstract is a factual summary of the work and precedes the article. Manuscripts should be typewritten, double-spaced, and have generous margins. Subheads are strongly encouraged. The original and one copy should be submitted. Pages should be numbered. Manuscripts are not returned; however, original photographs or drawings will be returned upon request after publication. Manuscripts should be no longer than ten typewritten pages. Exceptions will be made only under most unusual circumstances.

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References should be limited to ten; if more than ten are listed, the author(s) may designate the ten most significant to be printed and readers will be referred to the author(s) for the complete list. References must contain, in the order given: name of author(s), title of article, name of periodicals with volume, page, month and year. References should be numbered consecutively in the order in which they appear in the text. Authors are responsible for reference accuracy.

ILLUSTRATIONS

Illustrations should be professionally drawn and/or photographed. Glossy black and white photos are preferred. They should not be mounted and should have the name of the author(s) and figure number penciled lightly on the back. An arrow should indicate the top of the illustration. In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material. Up to four illustrations will be accepted at no charge to the author(s). If more than four are necessary, it is understood that the author(s) will be responsible for the reproduction costs.

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THE **JOURNAL** OF THE **ARKANSAS** MEDICAL SOCIETY

Volume 92 Number 4

September 1995

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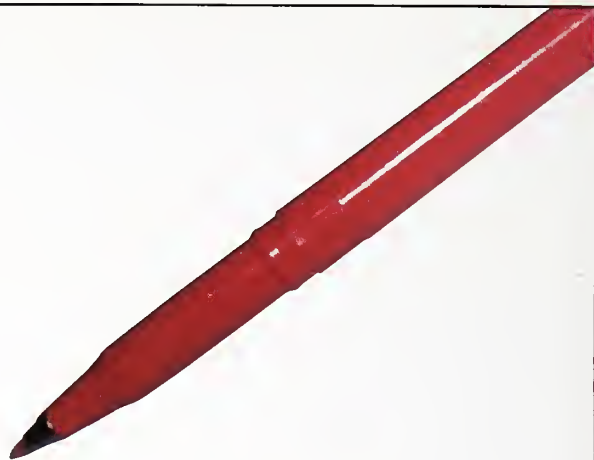
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A Recent Measles
Outbreak in Arkansas
page 159

Recent Advances
in Pediatric HIV
page 165

The Role of INR
in Clinical Practice
page 178

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CONTENTS

FEATURES

- 156** Everyone is Interested in Health (maybe too interested)
History of a Retired Physician before being overwhelmed by everyone interested in health
Editorial
Ben N. Saltzman, M.D.
- 159** A Recent Measles Outbreak in Arkansas
Scientific Article
Suzanne Maxson, M.D.
David Bourue, M.D., M.P.H.
Gordon E. Schutze, M.D.
Richard F. Jacobs, M.D.
- 165** Recent Advances in Pediatric HIV
Scientific Article
John Menard, M.D.
Nancy C. Tucker, R.N.
Toni Darville, M.D.
- 171** Frozen Section Error? - Rare But Disastrous
Loss Prevention Case
J. Kelley Avery, M.D.
- 178** The Role of International Normalized Ratio (INR) in Clinical Practice
Arkansas Foundation For Medical Care Special Report
Marian Chen, M.D.
William E. Golden, M.D.
- 188** An Emergency Room Short Story
Robert A. Floss, M.D.

DEPARTMENTS

- 173** Cardiology Commentary & Update
181 State Health Watch
184 Arkansas HIV/AIDS Report
186 New Members
188 Outdoor MD
189 Radiological Case of the Month
193 Medicine in the News
193 AMS Newsmakers
193 In Memoriam
195 Things to Come
196 Keeping Up

Cover photo of fly fishing on the White River taken by A.C. Haralson, Arkansas Department of Parks and Tourism.

Everyone is Interested in Health (maybe too interested)

Ben N. Saltzman, M.D.

Four years ago, I retired to Mountain Home from the active practice of medicine in its many forms.

Since retiring, I have found myself involved in several voluntary health related board activities and a deluge of mail from all parts of the universe seeking charitable contributions. Each time I send in a contribution, I receive demands for contributions from organizations either related to the first donee or from recipients of my name on mailing lists. Now it seems my entire day is taken up with opening mail and trying in some way to keep from expending a rather small retirement income.

Aside from the massive amount of charitable requests, the mail includes advertisements of cures for all the ills of mankind. Most of these are touted by different types of practitioners. All are derogatory in reference to the medical establishment. Surprisingly, some of the exponents of cures carry the M.D. designation after the names. Many of the sales pitches remind me of the advertisements of the old medicine shows.

While looking for ways to increase my investment income, I recently subscribed to *Forbes* magazine, a well-known authoritative source for reliable investment information. The cover story of my first issue was labeled, "The Health Scare Industry. How businesses, doctors and journalists prey on your food anxieties." The author, a capable writer, titled his article, "*Lies, damned lies, and Medical statistics.*" He makes a good argument against

History of a Retired Physician *before being overwhelmed by everyone interested in health*

Following an internship and residency at Gorgas Hospital in the Panama Canal Zone, I served in the United States Army in the Canal Zone as a designated Internist, but detached to the Public Health Service of the Zone to care for the civilian population. Life was good to us during World War II. We were slightly worried about the possibility of invasion, but were never seriously threatened. We were exempt from income taxes, from property taxes and from military restrictions. Gasoline for our cars amounted to six cents per gallon.

The end of the war brought me to Mountain Home, Arkansas, to become a country doctor. The early years were tough. The hours were long and unpredictable. There was no hospital. With the war over, maternity cases became the rule. There was no Medicaid and very little employment available. Hence, my income was very limited.

However, the patients made me feel welcome and encouraged me to try to make things better. I was able to build a small private hospital and bring in other doctors. Those doctors who did not join me, formed other groups or practiced solo. Later we helped the community build a larger hospital.

The community continued to grow and despite the increased number of physicians, the hours were still long and busy. I experienced a moderately severe myocardial infarction and took my first vacation in years. This was followed by an invitation from the Dean of the University of Arkansas College of Medicine to head up a new Department of Family and Community Medicine in the college. So after 28 years of private practice, I became an academician as Professor and Chairman of the Department.

After seven years in that position, I retired because of age restrictions in land grant universities. At the Dean's suggestion, I applied for the newly vacated position of Director of the State Health Department and received the appointment. After six years in that capacity, I stepped down to become the Medical Director for the Pulaski County division of the State Department of Health. This was a busy job, but more clinically oriented. I enjoyed it for four years before finally retiring full time and returning to Mountain Home.

believing what is being considered gospel from so-called authorities. The list is considerable.

We have begun to doubt some of the things we read. In fact, most of the things I thought I had learned over the years are being debunked. I'll refrain from listing them, but the August 14, 1995 issue of *Forbes* does make interesting reading.

* Ben N. Saltzman, M.D., is a retired family practitioner from Mountain Home, Arkansas.

Two days after reading the *Forbes* article, I received a copy of *Medical Focus* published by the Oregon Health Sciences University Alumni Association, part of my Alma Mater. The featured article is "Alternative Medicine and the School."

There is a great deal of information these days about "Alternative Medicine." There are 16 therapies in the alternative medicine definition offered by David Eisenberg of Harvard. It's a representative, but doubtless, incomplete list including: acupuncture, biofeedback, chiropractic, commercial diets, energy healing, folk remedies, spiritual or religious healing, herbal medicine, homeopathy, hypnosis, guided imagery, lifestyle diet, massage, relaxation techniques, self-help groups and vitamins (high dose, mega-dose). An estimated 61 million people have used one of these therapies.

Years ago, I asked my public speaking teacher what I should talk about that would interest an audience. She replied, talk about health. Everyone is interested in health. She was right. But, somehow, I feel that there now may be too much interest. ■

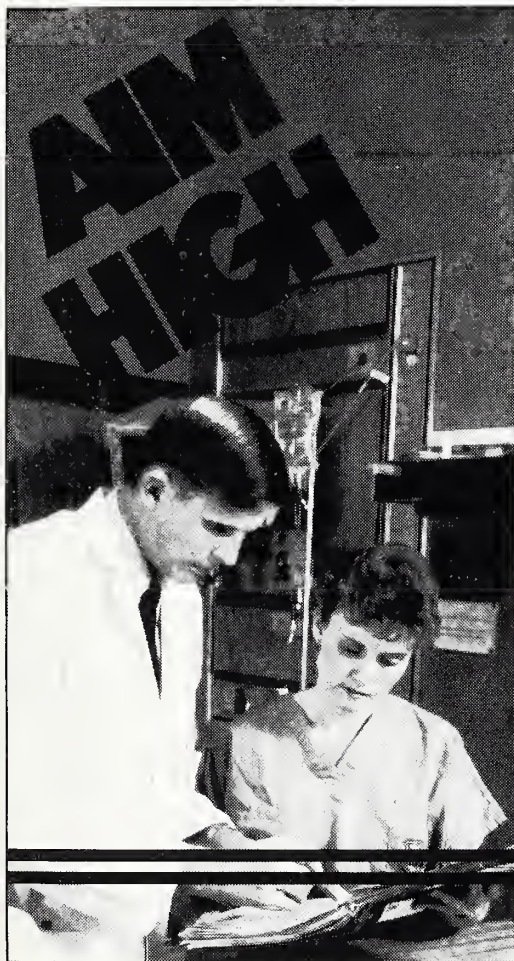
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A Recent Measles Outbreak in Arkansas

Suzanne Maxson, M.D.*

David Bourne, M.D.**

Gordon E. Schutze, M.D.***

Richard F. Jacobs, M.D.****

ABSTRACT

On a worldwide level, measles is a common infection, especially in developing countries. In the United States, however, the disease has become very uncommon secondary to the widespread use of immunizations. Because of this, many physicians have not had measles themselves, nor have they treated patients for the infection. This relative rarity may delay diagnosis and the institution of appropriate infection control measures, thus resulting in increased numbers of exposed persons. Until measles is eradicated, measures to ensure appropriate immunization and control outbreaks are essential. A recent small outbreak in Arkansas is reported here along with a review of the disease and the measures to control outbreaks.

OUTBREAK DESCRIPTION

The first case of measles occurred in a 5 year old male who had the onset of rash on December 5, 1994. He was unimmunized for religious reasons and contracted measles in a western state. Case two was a playmate of the original case with rash onset December 17, 1994. He was four years old and belonged to the same church as case one. He was also unimmunized. Case three was the mother of case one. The diagnosis of measles in case one was not made until his mother was diagnosed. The mother was 24

years old and was hospitalized through an emergency room. The two ambulance attendants who transported her were both born after 1957 and had had only one dose of measles immunization. They were required to miss work on days five through 21 post-exposure. The fourth case was the brother of case three. He was 27 years old and also unimmunized. He was treated at home following the development of a rash on December 31, 1994. He did not attend the same church as the first three cases.

The fifth case was a 23 month old female who was also unimmunized. She developed a rash on January 6, 1995. She was hospitalized but not placed in isolation. This was a different hospital from the one in which case three was hospitalized, but located in the same town. The diagnosis was made approximately six days after admission, based on the return of a positive convalescent titer. The sixth case was a six month old female unimmunized against measles, who developed a rash on January 13, 1995. She was placed in isolation after admission from the same hospital emergency room as case five. Neither case five or six is affiliated with the church group to which cases one, two and three belong.

The epidemiologic investigation was conducted by personnel of the local health units and central office staff of the Health Department's Division of Immunization and Communicable Disease. The sources of exposure for cases 5 and 6 were never discovered.

It is important to note that all six patients involved in the outbreak were unimmunized. Therefore the outbreak was preventable. In addition, the lack of early diagnosis resulted in exposures of hospital personnel including physicians, ambulance attendants and nurses. The exposed, susceptible personnel were required to

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miss over two weeks of work resulting in lost productivity and income.

EPIDEMIOLOGY

Measles is seen throughout the world. Despite the widespread use of vaccine, approximately one million children die of the disease each year. This is more deaths than occur from all other childhood vaccine preventable diseases combined and more than from any other single infectious agent. In developing countries

Prior to the use of immunizations against measles in the United States the annual number of cases varied from 200,000-500,000 per year. Since the introduction of vaccine in 1963 the number has dropped by almost 99%.³

the mortality rate varies from 3% to 15%.¹ It is currently estimated that 78% of children less than one year of age have been vaccinated with the live attenuated measles vaccine on a worldwide level.² Without the use of measles vaccine, epidemics lasting three to four months would be predicted to occur every two to five years. Countries in which measles vaccine is used widely have experienced a marked decrease in the incidence of disease.³ Prior to the use of immunizations against measles in the United States the annual number of cases varied from 200,000-500,000 per year. Since the introduction of vaccine in 1963 the number has dropped by almost 99%.³ There were approximately 1500 cases of measles in the United States in 1983. Subsequently, an increase in incidence has occurred in the late 1980s and early 1990s. With increased rates of immunization and the routine use of two doses of measles vaccine this has come back under control.³ In 1993 there were 312 cases reported to the Centers for Disease Control and Prevention. This was the lowest number ever recorded in the United States. This may reflect cyclical changes in measles incidence as well as increases in measles vaccination coverage among preschool aged children, increased use of a second dose of measles vaccine among school and college aged persons, and increased efforts to control measles throughout the western hemisphere.⁴ There was a slight increase in the number of cases in 1994 up to 902. This was tapering at the end of the year, however.⁵ These national trends over the last several years have been mirrored in Arkansas. After very low numbers for many years a peak occurred in 1990 when 55 cases were reported. There were no cases reported in 1992 or 1993. Following this, the described outbreak occurred at the end of 1994 with 6 known cases.

CLINICAL PRESENTATION

Measles is the most contagious infectious agent in

humans.⁶ The infection is spread by direct contact with respiratory secretions of infected persons. Patients with measles are often most infectious during the late prodromal phase of illness when cough and coryza are at a peak. They probably remain infectious from several days before until several days after the onset of the rash.³

The incubation period for measles is approximately 10 days, followed by the clinical prodromal phase. This is associated with fever, coryza, conjunctivitis and

cough. The fever usually ranges up to 39.5°C, and lasts

for three or four days after the appearance of the exanthem. Conjunctivitis can be severe and associated with profuse lacrimation and occasionally photophobia. On slit lamp examination corneal and conjunctival lesions can often be seen. The cough may also be significant and can have a brassy quality.

Two or three days after the prodromal symptoms appear, the pathognomonic exanthem appears inside the mouth. Koplik's spots are one millimeter white lesions that begin opposite the lower molars but can spread throughout the mouth to involve the entire buccal and labial mucosa. The mucosa itself is bright red. Koplik's spots disappear shortly after the appearance of the exanthem.

The typical measles exanthem appears approximately 14 days after the patient is exposed to the virus. The rash begins behind the ears and in the hairline of the forehead as a discrete maculopapular erythematous rash which blanches with pressure. It spreads sequentially downward from the face to the neck, trunk, upper extremities, buttocks, and finally the lower extremities. As it progresses downward it becomes confluent. Generally on the third day the rash begins to resolve in the same order in which it appeared, from the face downward. The duration of the rash is usually six to seven days and it eventually develops a brownish discoloration that does not blanch. The fever, coryza, and conjunctivitis usually disappear on the third or fourth day of the exanthem, but the cough can persist up to ten days. A patient may also experience pharyngitis, cervical lymphadenopathy, or splenomegaly during the exanthem. Younger children may also have diarrhea, vomiting, abdominal pain, croup, or laryngitis. Unusual manifestations of measles include pneumonia, bronchiolitis, myocarditis, pericarditis, encephalitis and appendicitis.

A separate type of infection known as *modified measles* is experienced by some individuals. This occurs

in infants who are less than nine months of age and still have transplacentally acquired maternal antibodies as well as in those individuals who have received immune globulin in an effort to prevent classic measles exposure. The illness is shorter in duration and generally has milder symptoms, but is similar to typical measles.

A third presentation of measles occurs in those individuals who received killed measles vaccine between 1963 and 1968. After exposure to natural measles an illness known as *atypical measles* occurs. It is characterized by the abrupt onset of fever, headache, myalgias, weakness, abdominal pain, and cough. The rash appears atypically, beginning at the wrists and ankles and spreading upwards. It rarely appears above the nipple line. A significant proportion of patients have pneumonia and may present with tachypnea, dyspnea, cough and respiratory distress.

COMPLICATIONS

The most common acute complications of measles involve the middle ear (5%-9% of cases) the lungs (1%-7% of cases), and the central nervous system.⁷ Fever that persists beyond the third day of the exanthem may be a sign that bacterial superinfection has occurred. This may be due to local tissue damage inflicted by the virus as well as depressed cellular immunity, and can affect any area of the respiratory tract including the middle ear. Pneumonia may be due to infection by the measles virus itself or to bacterial superinfection. Acute encephalitis due to measles appears clinically in 1 in 1000 to 1 in 2000 patients with measles infection. Patients will present with a resurgence of fever during convalescence, headaches, seizures and changes in the state of consciousness. This form of illness may be mild to severe with a high proportion of patients

who recover being left with neurologic sequelae.³

Subacute sclerosing panencephalitis (SSPE) is a chronic late complication of measles infection. It is a rare degenerative central nervous system disease of children and adolescents due to persistent measles virus infection. Patients suffer from an insidious onset of behavioral and intellectual deterioration. At present there is no effective treatment and the average duration from onset of illness to death is six to nine months. The incidence of this complication has decreased significantly owing to the extensive use of vaccines.⁸

MANAGEMENT AND INFECTION CONTROL

Measles is definitely diagnosed when the virus is isolated in tissue culture from nasopharyngeal secretions, conjunctiva, blood, or urine. This can be technically difficult, however, and serologic diagnosis may be required. This may be done by comparing acute serum with convalescent serum which is obtained approximately two to four weeks later.

The 1994 publication by the Committee on Infectious Diseases of the American Academy of Pediatrics, *The Red Book*, has very specific recommendations regarding management and infection control for patients with measles.⁹ There is no specific antiviral therapy available for measles. It is susceptible to ribavirin *in vitro* and this has been given to severely affected individuals. However, ribavirin has not been tested in controlled trials and is not approved by the Food and Drug Administration for the treatment of measles. Some studies indicate that vitamin A treatment of children with measles in developing countries has been associated with decreased morbidity and mortality. The American Academy of Pediatrics recommends considering vitamin A supplementation for patients six months to two years of age with measles who are hospitalized and have complications of the infection. In addition this is recommended for patients older than six months of age with measles and certain risk factors including immunodeficiency, ophthalmologic evidence of vitamin A deficiency, impaired intestinal absorption, malnutrition, and recent immigration from areas where high mortality rates from measles are observed. The recommended dosage is 200,000 IU for children one year and older, and 100,000 IU for children six months to one year. This is given as a single oral dose. This dose should be repeated the

A measles outbreak exists in a community whenever one case of measles is confirmed. Infection rates can be reduced by the use of isolation, vaccination, and immune globulin.

next day and again in four weeks for children with ophthalmologic evidence of vitamin A deficiency.¹⁰

A measles outbreak exists in a community whenever one case of measles is confirmed. Infection rates can be reduced by the use of isolation, vaccination, and immune globulin. Hospitalized patients should be placed in respiratory isolation until four days after the onset of rash. If the patient is immunocompromised, isolation should be maintained for the duration of the illness.

Live-virus measles vaccine if given within 72 hours of exposure can provide protection in some cases. This

should be the intervention of choice in the control of school outbreaks. Persons should be considered susceptible to measles unless they have had a documented episode of physician-diagnosed measles, have laboratory evidence of measles immunity, were born before 1957, or have had documented immunization. Persons who are exempt from measles vaccine for medical, religious, or other reasons should be excluded from the outbreak setting until at least two weeks after the onset of rash in the last case of measles. Persons who are revaccinated or are given their first dose of vaccine as part of an outbreak control may be immediately readmitted to school. Children under one year of age can be given the monovalent measles vaccine (or an MMR if this is unavailable) as early as six months of age when exposure to natural measles occurs. If the first dose is given prior to their first birthday these children should be revaccinated with an MMR at 12-15 months of age and again at school age. In medical facilities some medical personnel born before 1957 have acquired measles after exposure and because of this, vaccination of older employees with occupational exposure should be considered. Susceptible exposed personnel should be relieved from patient contact from the fifth to the 21st day after exposure regardless of whether or not they received vaccine or IG after exposure. Personnel who develop measles should be removed from patient contact until four days after they develop the rash.

The current recommendations for routine immunizations include an initial dose of vaccine at 12-15 months and the second dose at 4-6 or 11-12 years. This is usually given in conjunction with mumps and rubella vaccine as an MMR. Contraindications to measles immunization include pregnancy, history of anaphylactic reaction to neomycin, recent administration of immune globulin, and significantly immunocompromised state. It is currently recommended that persons with histories of anaphylactic reactions to eggs should only be vaccinated with extreme caution using skin testing and possibly desensitization. However, in a recent study in which children with histories of anaphylaxis to eggs were given an MMR, no adverse reactions occurred.¹¹ It is therefore likely that this recommendation will change in the future. Persons with human immunodeficiency virus infection should be routinely immunized. This vaccine has been demonstrated to be safe in these children and the risk of measles infection outweighs the risk of vaccination.

Immune globulin (IG) can be given to prevent or modify measles in a susceptible person within six days of exposure. It is indicated for susceptible household contacts of measles patients, particularly, those under a year of age, immunocompromised persons, and pregnant women. The usual recommended dose is 0.25ml/kg given

intramuscularly; immunocompromised children should receive 0.5ml/kg. For either dose the maximum is 15ml. Infants under five months of age usually have some degree of protection from passively acquired maternal measles antibodies. However, if there is no maternal history of measles immunization or infection then it would be reasonable to give children less than six months of age IG. When active measles is diagnosed in mothers, unimmunized children of all ages in the household should be given IG, since the mother could not have transmitted protective antibodies to the children before birth. Children and adolescents with symptomatic HIV infection who are exposed to measles should receive IG prophylaxis regardless of vaccination status. For any patient who regularly receives IGIV, the usual dose of 100 to 400mg/kg should be sufficient for measles prophylaxis after exposures occurring up to three weeks or more after receiving IGIV. For those children who are given IG, measles vaccine should be given five months (if the dose was 0.25ml/kg) or six months (if the dose was 0.5ml/kg) after IG administration, provided that the child is at least 12 months old.⁹

In addition to measures for individual clinical care, appropriate policies must be in place to protect the general population. These include: hospital and clinic personnel policies that require evidence of measles immunization for those born after 1957 who have patient contact responsibilities; hospital and clinic policies for isolation of those presenting or hospitalized for rash illnesses; and prompt reporting to the Health Department when measles is suspected or confirmed.

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The Arkansas State Medical Board not only has an appreciation for what Don has been to us, but we also recognize that he has been a tremendous asset to the State of Arkansas. We feel that any individual or group that has been the benefactor of Don's participation is by far the richer.

Don, we wish you well.

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BE IT THEREFORE RESOLVED:

THAT, the Arkansas Medical Society represented by its Executive Committee assembled does hereby commend Don Phillips for his service to the medical profession, the state's medical institutions, and the people of Arkansas; and

THAT, the Arkansas Medical Society will miss a valuable member of the medical team and wishes him well.

Adopted July 26, 1995 by the Arkansas Medical Society Executive Committee.

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Toni Darville, M.D.***

ABSTRACT

Pediatric human immunodeficiency virus (HIV) infection is a disease of mother-to-infant transmission. The World Health Organization estimates there will be ten million HIV-infected children by the end of this century. It is now thought that both intrauterine and intrapartum transmission of HIV occurs. Infants infected *in utero* develop clinical signs and symptoms at an earlier age than those who are infected at the time of delivery. We describe two cases that demonstrate early-onset and late-onset pediatric HIV disease, respectively. Recently, it was determined that perinatal transmission of HIV can be significantly reduced by the administration of the antiretroviral drug, zidovudine (ZDV), to HIV-positive pregnant women and their newborns, making HIV screening of pregnant women more desirable than ever. A program of universal voluntary HIV testing for pregnant women has been successfully implemented at the University of Arkansas for Medical Sciences. Details of this program are described herein.

EPIDEMIOLOGY/TRANSMISSION

The first pediatric case of acquired immunodeficiency syndrome (AIDS) was diagnosed in 1982. The Centers for Disease Control and Prevention has received reports of 5,734 cases of pediatric AIDS as of June 1994. The World Health Organization estimates that there will be ten million HIV-infected children by the end of this century. There have been 88 children evaluated for HIV-related illness at Arkansas Children's Hospital since 1988; 59, or 67%, remain HIV positive or have developed AIDS, while 29, or 33%, have converted to an HIV negative status.

Pediatric HIV is currently a perinatal disease. Since

blood donor screening and heat treatment of clotting factor concentrates began in 1985, the risk to children of acquiring HIV from blood or blood products has been minimal. Yet, the seroprevalence of HIV among women of childbearing age has risen approximately 40% per year over the past decade (current seroprevalence is 0.15%) and 95% of current childhood HIV infections are acquired from the mother. In the United States, the risk of transmission from an HIV-positive mother to her newborn is 25-35% for each pregnancy. This risk is increased when the mother is more advanced in her HIV disease. Increased infant exposure to maternal blood (e.g., trauma during delivery, fetal scalp monitors) also seems to carry an increased risk. Prematurity also increases the risk of transmission. Possible causes of increased viral transmission in premature newborns include minimal transplacental passage of protective antibodies in the early months of gestation, and immaturity of neonatal epithelial and mucosal surfaces. Breast milk also can transfer HIV, therefore, breastfeeding is not recommended in areas where suitable formula substitutes are available.

CLINICAL

In the pediatric population, immunosuppression occurs at higher absolute T helper (Th) counts than in adults, and varies inversely with age (see table on next page). Notice that the percent of Th cells for the same degree of immunosuppression is constant across the age breaks.

It is now thought that both intrauterine and intrapartum transmission of HIV occurs. When intrauterine transmission occurs (estimated at approximately 20% of cases), the infant shows early onset of clinical disease and aggressive symptoms. When transmission occurs at or near delivery (estimated at approximately 80% of cases), there is often a much more indolent course with a delayed onset of clinical symptoms.

Clinical features of AIDS common to children and adults include opportunistic infections outside the central nervous system like *Pneumocystis carinii* pneumonia, chronic mucocutaneous candidiasis, chronic diarrhea, chronic

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Table 1.*

Immunologic Category	Age of Child					
	< 12 Months		1 - 5 Years		6 - 12 Years	
	Th/mm ³	%Th	Th/mm ³	%Th	Th/mm ³	%Th
No evidence of suppression	≥ 1500	(> 25)	≥ 1000	(≥ 25)	≥ 500	(≥ 25)
Evidence of moderate suppression	750-1499	(15-24)	500-999	(15-24)	200-499	(15-24)
Evidence of severe suppression	< 750	(< 15)	< 500	(< 15)	< 200	(< 15)

* Centers for Disease Control and Prevention: Recommendation of the U.S. Public Health Service Task Force on the use of zidovudine to reduce perinatal transmission of human immunodeficiency virus. MMWR 43:RR-11:1-20, 1994.

fever, diffuse adenopathy, hepatosplenomegaly, and chronic eczema. Renal disease and cardiomyopathy are common in the end stage of disease.

Some features that are common in children are rare in adults, such as early-onset encephalopathy, recurrent bacterial infections, chronic lymphoid interstitial pneumonitis, and parotitis. Special attention must be given to neurodevelopmental problems as they can be the presenting symptoms. Examples include mental and motor delays, attention deficit disorder, and loss of acquired milestones.

CASE REPORTS

Case Report 1

A case report consistent with probable intrauterine transmission follows:

A Caucasian female infant, CF, was born in June 1990 to an HIV-positive mother with a history of intravenous drug use. The father died of AIDS in early 1990. At two weeks of age, CF was hospitalized for mastitis. Her hematologic parameters were normal as follows: white blood cell (WBC) count, 15,000/mm³ with 60% neutrophils and 40% lymphocytes; platelet count 299,000/mm³ and hematocrit, 50%. She had an absolute Th lymphocyte count of 2900/mm³, with 54% Th cells. Wound and blood cultures grew *Enterobacter cloacae*. CF was discharged to home after a course of parenteral antibiotics.

At eight weeks of age, CF was placed in the hospital after an apneic episode associated with cyanosis. Bacterial cultures were negative, but a severe candidal rash would not improve on topical Nystatin. A polymerase chain reaction assay for HIV DNA was positive. Some of her hematologic parameters were now abnormal: hematocrit of 30%; platelet count of 52,000/mm³ and an absolute Th count of 943/mm³, to give only 19% Th cells.

At twelve weeks of age CF was admitted for vomiting, and candidal esophagitis was diagnosed. She also had severe anemia, thrombocytopenia and

leukopenia. Blood cultures were positive for *Histoplasma capsulatum* on the same day that a bone marrow biopsy revealed this fungus. Amphotericin B was given to a total dose of 40 mg/kg over six weeks. Antiretroviral therapy was started and *Pneumocystis carinii* prophylaxis was initiated. At the completion of Amphotericin B, maintenance ketoconazole was begun. CF had multiple admissions in 1992 and 1993. Presenting symptoms included dehydration, fever, respiratory distress, and progressive hypertonia, along with episodes of extreme irritability, failure to thrive and progressive encephalopathy with seizures. In 1993, CF was diagnosed with HIV cardiomyopathy. In February 1994, CF expired secondary to cardiac failure. CF was three and one-half years old. The total cost of her hospital care was \$230,000.

Case Report 2

The following is a case report consistent with perinatal HIV transmission at delivery:

BF was born in February 1987. BF's father had hemophilia and died of AIDS shortly after the baby's birth. At two years and six months of age, BF had had no significant medical problems. Her height and weight were in the 5th percentile and her physical examination was remarkable only for mild hepatosplenomegaly and diffuse shotty lymphadenopathy. Hematologic parameters were as follows: WBC count, 6,600/mm³ with 50% monocytes, 27% neutrophils and 23% lymphocytes; hematocrit 33%; platelet count, 332,000/mm³. An immunoglobulin gamma (IgG) level was elevated at 2775 mg/dl (normal IgG levels for a 2-year-old are 750 ± 200 mg/dl). BF's absolute Th cell count was decreased at 462/mm³. Her Th percent was 17. Zidovudine therapy was started at this time. When BF was three years old, she was diagnosed with parotitis and oral candidiasis. Follow-up hematologic parameters had improved while on zidovudine. Absolute Th count was now 1300/mm³, Th % was 27. By age 4, her height and weight had improved to the 25th percentile and her

Th count was stable at 1036/mm³, 24% Th. BF was continued on ZDV. *Pneumocystis carinii* prophylaxis in the form of trimethoprim-sulfamethoxazole was given three times weekly. As the literature at that time supported, BF received monthly intravenous infusions of immunoglobulin. In 1993, BF, now six years old, was switched to didanosine (ddI), when her growth parameters and Th count revealed a slow, steady decline. BF is now seven years old and in the second grade. Her height and weight have remained between the 10th and 25th percentile and she has remained essentially asymptomatic except for intermittent mild parotitis and diffuse, shotty lymphadenopathy. She has been hospitalized only once in her life for pneumococcal pneumonia that resolved with routine care.

PREVENTION

Physicians can have a tremendous impact on this disease through our efforts in prevention. We should strive to educate our communities in abstinence, safe sex (latex condoms along with spermicide containing nonoxynol-9), avoidance of IV drug use, and the use of universal precautions in all walks of life. A recent development in the prevention of perinatal HIV is very exciting. It constitutes one of the few steps forward in some time. A recent clinical trial, the AIDS Clinical Trial Group Protocol 076 (ACTG 076), has provided encouraging data for possibly decreasing the incidence of HIV transmission in pregnancy through the administration of ZDV to infected pregnant women and their newborns. The study regimen compared ZDV prophylaxis to placebo. The criteria for entry into this study included: 1) HIV-infected pregnant women at 14-34 weeks of gestation with; 2) Th counts greater than 200/mm³; and 3) no prior antiretroviral therapy during the current pregnancy; and 4) no clinical indication for antepartum antiretroviral therapy.

The patients were randomized to receive ZDV or placebo. The patients who received ZDV were given 100 mg by mouth five times per day. This was started at 14-34 weeks of gestation and continued throughout the pregnancy. When labor began, ZDV was changed to an intravenous form with a loading dose of 2 mg/kg over one hour, followed by a 1 mg/kg/hour continuous infusion until delivery. The newborns received oral ZDV within eight to twelve hours of birth at 2 mg/kg/dose four times per day for six weeks. A diagnosis of HIV in the infant was established by a positive viral culture for HIV.

In the interim analysis, 356 infants had been born to mothers entered into the protocol. There was an estimated transmission rate of 25.5% in the placebo group (40/185 infants). This compared with a transmission rate of 8.3%, or 13/180 infants, in the ZDV group. This corresponds to a 67.5% relative reduction in the risk of HIV transmission. The difference in the

estimated transmission rate between the ZDV group and the placebo group was statistically significant with $p = 0.0006$. The only side effect seen was a mild decrease in hemoglobin concentration in the ZDV-treated infants that was clinically insignificant.

There are several limitations to this study. Most importantly, perinatal HIV transmission was still observed despite drug therapy. In addition, the study did not determine: 1) efficacy in women with Th counts less than 200 with advanced disease, who had received prior antiretroviral therapy, or who had ZDV-resistant strains; 2) efficacy prior to 14 weeks or after 34 weeks gestation; 3) the relative contributions of gestational, prepartum, intrapartum, and neonatal administration of ZDV; 4) long-term side effects of ZDV on mothers and infants. The first trimester of pregnancy was avoided in this study secondary to the unknown teratogenicity of ZDV. Even with these limitations, this clinical protocol demonstrated that the risk of perinatal HIV transmission can be substantially reduced by the administration of ZDV prophylaxis and has prompted the Centers for Disease Control and Prevention (CDC) to issue recommendations on its use.

CDC RECOMMENDATIONS

All HIV-infected women should be informed of the potential for reduction of HIV transmission to their infants. They should be told of short-term safety, but also of the unknown long-term risks to themselves and their infants. The mother will basically be making a decision on risks versus benefits. Because of the limitation of the ACTG 076 protocol to delineate efficacy of the individual components of the study, gestational versus intrapartum versus neonatal, current recommendations include consideration of using portions of the protocol. Dependent on a case-by-case situation, when the clinical parameters do not precisely fit the ACTG 076 criteria, portions of the protocol that are applicable may be entertained. For example, an HIV-infected mother with no prenatal care delivers an infant precipitously so that parenteral ZDV use during labor is not possible. This mother should be offered the option of her infant receiving ZDV prophylaxis for six weeks if the drug can be started within 24 hours of the infant's birth.

The University of Arkansas for Medical Sciences (UAMS) and Arkansas Children's Hospital (ACH) have become proponents of universal voluntary HIV testing of all pregnant patients coupled with education. Key issues covered during risk versus benefit discussions center on the limitations of the ACTG 076 study.

Basically, all patients are potential candidates. No stigmata should be attached to pregnant women who decide against participation.

The current policy followed at UAMS includes pretest counseling, and then, informed consent for the

HIV test in all pregnant patients. If the initial test is positive, it is repeated and a second positive test is confirmed by Western blot. Consenting mothers have baseline lab obtained and oral ZDV is started after 14 weeks estimated gestation. Labs are followed monthly. When labor begins, intrapartum administration of ZDV is started and continued through delivery. Infants are started on oral ZDV and follow-up is arranged in the Pediatric Infectious Diseases Clinic at Arkansas Children's Hospital, as well as with the baby's primary care physician. Follow-up of the mother is arranged through the High-Risk Obstetrics Clinic and then through the Internal Medicine Clinic at UAMS. Since the institution of this protocol at UAMS in December 1994, an average of seven infants per month have been referred to the Pediatric Infectious Diseases Clinic at ACH. In contrast, in the two years previous, an average of one infant per month (an average from over two years) had been referred to the same clinic.

CONCLUSIONS

The ACTG 076 study has demonstrated a means to substantially reduce the risk to the newborn of acquiring HIV from an infected mother. There are limitations to

the study and prospective patients need education concerning the disease, its transmission, and risks inherent in ZDV prophylaxis. Informed consent should be obtained. For further information concerning the ACTG 076 protocol, suggested follow-up schedules for the mother and infant, or updates and new information, please call either the Obstetrics and Gynecology Office at the University of Arkansas for Medical Sciences at (501) 686-7164 or the Infectious Diseases Division at Arkansas Children's Hospital at (501) 320-1416.

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1	2	3	4	5	6	7
8	9	10	11	12 Capitation Strategies for Practice Survival		
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			1	2	3	4	
5	6	7	8	9 Medical Office Management - Front Office		10 Medical Office Management - Back Office	
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Frozen Section Error? - Rare But Disastrous

J. Kelley Avery, M.D.*

Case Report

A 50-year-old obese woman reported to her primary care physician complaining of soreness and some pain in her right breast. Examination showed a small tender area of question in the upper outer quadrant of the right breast and the examiner thought that there was indeed a small mass present. She was referred for a mammogram, and the radiologist reported an area of microcalcifications deep in the central portion of the breast.

The physician of record referred the patient to a surgeon, who, on the basis of the mammogram report, recommended a biopsy. In explaining the situation to his patient, the surgeon told her that the suspicious area in the breast was not in the location where the tender lump was found and should be further examined with a biopsy. He further explained to his patient that the suspicious area found by the mammogram was in a location that would require general anesthesia. She wished to think about this recommendation and discuss it with her husband, but felt sure enough that she wanted the biopsy to allow the surgeon to schedule her for three days later. She reported at the scheduled time.

The biopsy was done under general anesthesia. The frozen section was very suspicious of cancer but not diagnostic. Mastectomy, which had been planned pending a malignant lesion, was not done. Permanent sections did not show the radiologically identified calcifications, and the pathologist recommended that a repeat mammogram be done after healing of the operative site had occurred.

The surgeon followed his patient after biopsy and did schedule a repeat mammogram in three months. The report of this examination showed that the lesion described on the initial study had not changed. A re-

peat study was recommended in three months. This examination was done as recommended, and the report again showed no change. On recommendation of the radiologist, her surgeon planned another mammogram for six months later.

At the six-month checkup, the surgeon believed that there had been no change in his patient's physical examination. She had been on a diet and had lost weight, and the breasts were smaller and easier to examine. Report of the mammogram done at this time indicated that the findings represented "an increase in a mass density associated with microcalcifications. An excisional biopsy is recommended to determine the true nature of this condition."

At this point, the surgeon again explained the situation to his patient. He again went over the possibility of a radical procedure if the mass proved to be malignant. The excisional biopsy was scheduled for a few days later. Needle localization was used to precisely identify the area and a wide excisional biopsy was done. Frozen section was done on the specimen, and the report was "infiltrating ductal carcinoma." While the patient was under anesthesia, a modified radical mastectomy was done. There were no problems associated with the operation. In the early postoperative period the surgeon learned that there was some confusion and disagreement in the pathology group about the exact nature of the lesion, but the prevailing opinion was that it was benign. The specimen was sent to a consulting pathologist in Tennessee, as well as to one at Sloan-Kettering Institute, for their opinions.

Within three or four days of the surgery, while the patient was still in the hospital, all the pathologists agreed that the lesion was, indeed, benign. However, one consulting pathologist stated that this was a lesion about which experienced pathologists might disagree.

The attending surgeon stayed very close to his patient, repeatedly assuring her that regardless of the true diagnosis, she was indeed cured of her disease. He made available to his patient all the many pathol-

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Company, Brentwood, Tennessee. This article appeared in the *Journal of the Tennessee Medical Association* in October 1993. It is reprinted here with the author's permission.

ogy reports. He continued to stress to his patient that the lesion was a hard one to be specific about; therefore, he could not criticize the pathologist who read the frozen section.

Some months went by before the pathologist and his group were sued, charging negligence in issuing a definitive opinion on a lesion about which there was some doubt. The surgeon was initially charged with negligence in failing to reassure his patient that the lesion was not malignant, thus contributing to her mental anguish. This charge was dismissed during the course of discovery and further investigation.

This woman had lost her breast and suffered through weeks of confusion about whether or not she had cancer. The plaintiff was very aggressive and the expert testimony was all on the side of the plaintiff. No expert could be found who would say that a diagnosis of "infiltrating ductal carcinoma" was within an acceptable standard of care, largely because in the presence of such an equivocal situation, permanent sections should have been done before committing this patient to such a disfiguring and emotionally shatter-

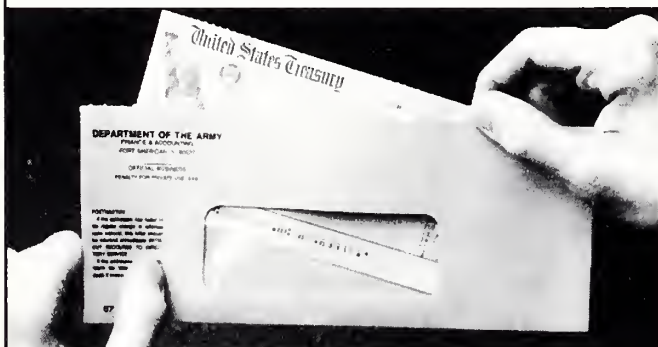
ing experience. It was argued that had the patient been aware of the differences of opinion regarding the definitive diagnosis, she and her surgeon would have waited and given even more time for further evaluation. A large settlement was necessary in this case.

Loss Prevention Comments

In medicine, when things go well in a given procedure or situation so consistently, it is easy to forget that in the same situation one can and does encounter unexpected complications. This is certainly the case with frozen sections. Almost always the surgeon can rely on the report of the pathologist to be correct. Almost always the surgeon can plan his approach at the table with confidence that the pathology report is accurate. "Almost Always!" Then there comes a situation like this when surgeons and pathologists realize that occasionally (even if very rarely) there comes a time when the definitive procedure should be deferred until the permanent sections have been processed and a final report is issued. ■

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Cardiology Commentary and Update

Derrick L. Richardson, M.D.*

Stephanie L. Lawhorn, M.D.**

J. David Talley, M.D.**

HEPARIN ASSOCIATED THROMBOCYTOPENIA

INTRODUCTION

Heparin is used in many conditions where a thromboembolic event is likely to develop or has already occurred. It was discovered in 1915 and is isolated from bovine lung and porcine intestine preparations.¹ It activates antithrombin III, and this complex binds and inactivates thrombin, activated factors IX, XI, XII, and prekallikrein.² While hemorrhage is a common complication, other adverse events are infrequent. It was not until 50 years after the initial description of heparin that heparin-induced thrombocytopenia (HIT) was reported.³ We report a patient with HIT and discuss the pathophysiology, diagnosis, and treatment options of this unusual but potentially fatal condition.

PATIENT REPORT

A 32-year-old male with an extensive history of marijuana and "crack" cocaine use was admitted to an outlying hospital with a 6-8 week history of progressive exertional breathlessness, paroxysmal nocturnal dyspnea, and lower extremity edema. A transthoracic echocardiogram showed enlargement of all cardiac chambers, a left ventricular thrombus, and an ejection fraction of < 15%. At this time, he was transferred for further evaluation and treatment.

The patient appeared much older than his stated age. He was frail and had anasarca. Crackles were heard in all lung fields. The apical impulse was laterally displaced and a summation gallop was auscultated. There was 3+ lower extremity edema. Massive cardiomegaly and diffuse interstitial infiltrates were seen on the chest x-ray. The initial platelet count was

179,000/mm³. Heparin was started because of the left ventricular thrombus.

Cardiac catheterization was done to find the etiology of the dilated cardiomyopathy. The right heart pressures were dramatically elevated and there was total occlusion of the proximal left anterior descending and proximal right and mid-circumflex coronary arteries. Only the first marginal branch of the circumflex coronary artery was patent. An intra-aortic balloon pump was placed because of hemodynamic instability.

Due to the long history of substance use, the patient was not felt to be a cardiac transplantation candidate. Medical management with pre- and afterload reduction and inotropic support was prescribed. On the sixth hospital day, the platelet count precipitously dropped to 64,000/mm³ and heparin was stopped (Figure 1). The following day, the platelet count reached a nadir of 24,000/mm³. A low molecular weight heparinoid, organan (Org 10172, Organon International BV, The Netherlands) was then given. Organan was prescribed with a named-patient exemption provision under a "compassionate" use protocol. The platelet count rebounded and reached a peak of 598,000/mm³. The patient developed further hemodynamic instability refractory to inotropic support and he died on the 21st hospital day.

DISCUSSION

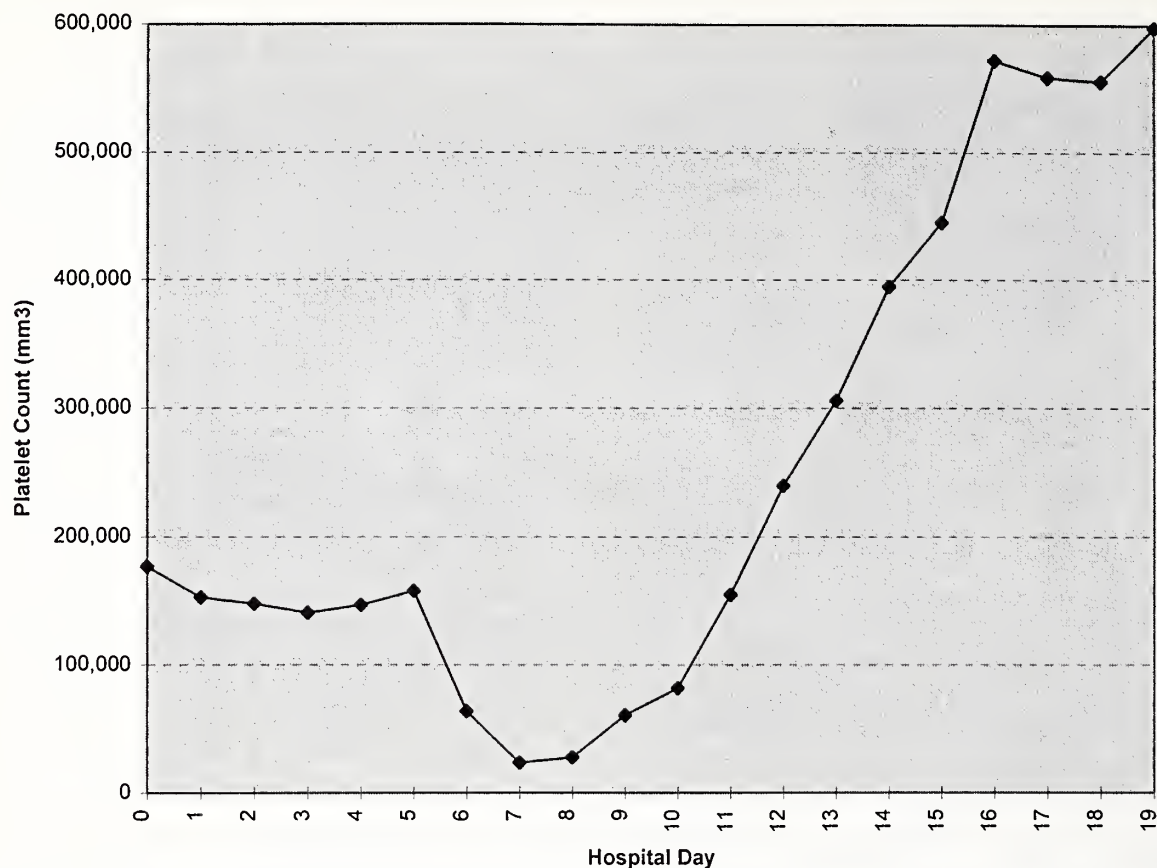
Pathophysiology and Clinical Overview

HIT occurs in approximately 25% of patients who receive heparin, but only 5% have a platelet count < 100,000/mm³. Untreated HIT is associated with approximately a 25% mortality.⁴ HIT occurs more frequently with the use of heparin isolated from bovine lung tissue.

There are three types of heparin-associated

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The dramatic drop and rebound in platelet count is consistent with heparin-induced thrombocytopenia.

thrombocytopenia. The first type is an immediate, transient, decrease in the platelet count after an intravenous bolus injection of heparin.⁵ A second form of HIT is characterized by a mild decrease in the platelet count between 100,000 - 150,000/mm³ that develops 2-4 days after heparin administration. Interestingly, the platelet count may return to pre-treatment levels despite ongoing heparin use. Arterial thrombosis has not been reported in these forms of HIT.⁶

The patient discussed above had the most common and severe form of HIT. In this syndrome, the platelet count is severely depressed, there is a high degree of heparin resistance, disseminated intravascular coagulation, and thromboembolism. It develops between 6 and 14 days after heparin use and platelet counts recovery to pre-treatment levels after heparin is stopped. The mechanism is thought to be the production of antibodies directed against the platelet membrane in the presence of heparin. The antibodies induce platelet aggregation and the development of a diffuse intravascular clotting (DIC-like) syndrome.⁷

DIAGNOSIS

The diagnosis of HIT depends on an appropriate clinical situation and laboratory evaluation. First, HIT

is suspected if the heparin treated patient develops a platelet count < 100,000/mm³ without evidence of other etiologies including disseminated intravascular coagulation, thrombocytopenia purpura, lupus anticoagulant syndrome, systemic lupus erythematosus, sepsis, or other potential mediation sensitivity. A positive diagnostic test, such as a positive ex-vivo platelet aggregation test, is confirmatory.

TREATMENT OPTIONS

There is no ideal treatment for patients with HIT. All therapeutic alternatives are limited by decreased efficacy, short half-life, secondary sensitization, delay in reaching therapeutic activity, or lack of commercial availability.

Decreased efficacy. Patients with HIT are at a high risk for the development of a thromboembolic complication and therefore medications with limited potency, such as antiplatelet agents, are of modest benefit. Nonetheless, there have been reports of success with aspirin used alone and in combination with dipyridamole.⁸ Dextran are semisynthetic polysaccharides that interfere with platelet aggregation and fibrin monomer polymerization. In patients with HIT, dextran may competitively inhibit the binding of heparin

to the platelet antibody. This agent has been used successfully in a few patients.⁹ Newer agents, such as glycoprotein IIb/IIIa receptor blocking medications, have not been reported to have been used in this condition.¹⁰

Short half-life. Prostacyclin analogues, such as iloprost, inhibit platelet aggregation, and have been successful in several patients with HIT, including those undergoing cardiopulmonary bypass.¹¹

Delay in reaching therapeutic activity. Oral anticoagulation with warfarin (Coumadin, DuPont Pharma, Wilmington, De) may be begun when HIT is suspected. The usefulness of this medication is limited by the delay in effectiveness, meanwhile, arterial thrombosis may ensue.

Lack of commercial availability. Several intravenous agents may soon be available and potentially represent a breakthrough in the treatment of HIT. Orgaran is a heparinoid consisting of two subfractions: a heparan sulphate component with a high affinity for anti-thrombin III, and a mixture of heparan sulphate, dermatan sulphate, and chondroitin sulphates that have a low binding capacity for anti-thrombin III. There is only a 5-10% cross reactivity of orgaran with the platelets of patients with HIT. Hirudin (Ciba Giagi,) is a direct antithrombin that does not function through the antithrombin III mechanism.¹² Pilot trials of this agent compared with heparin have shown benefit in patients with acute ischemic coronary syndromes, including acute myocardial infarction, and coronary angioplasty. Efgatan (Eli Lilly and Company, Indianapolis, In) is an intravenous agent that is a direct antithrombin and IIb/IIIa platelet receptor blocker that is currently being evaluated in patients with unstable angina pectoris and acute myocardial infarction. Argatroban (Novastan®, Texas Biotechnology Corporation, Houston, Tx) is also an intravenous thrombin inhibitor.

CONCLUSION

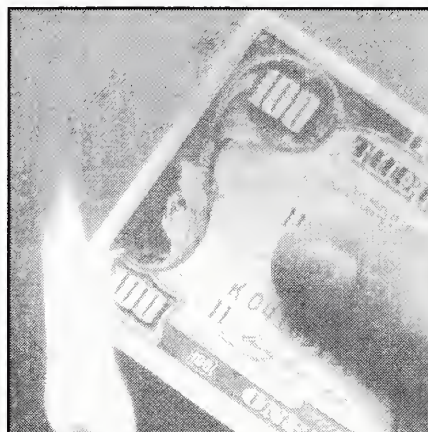
Severe thrombocytopenia is an unusual, but occasionally a fatal complication of heparin use. The diagnosis depends on the appropriate clinical scenario and a confirmatory laboratory test. Right now, treatment options are limited but may soon be expanded with the commercial availability of direct antithrombin medications.

Acknowledgments: The authors appreciate the assistance of Scott D. Berkowitz, MD, FACP for the assistance in obtaining Orgaran and Louis Fink, MD for doing the anti-Xa assays.

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ayne Kellar knows a good thing when he sees it. In 1973 he saw two of Searcy's clinics merging, and agreed to come on board as Administrator. "From the beginning, our goal was the highest-quality medical care possible for the people and families of central Arkansas," he says. "We treat our patients like family."

Years later Bill Starkey of The Medical Protective Company recommended a different professional liability plan for the center, and it looked good to Wayne for a number of reasons. "First, professional liability insurance is The Medical Protective Company's only business. It's their focus, not a sideline. They are the experts.

Second, they are the oldest professional liability carrier in the country— and stability is critical to my comfort and that of our physicians. Third, the economics is competitive. Fourth, the level of service we get from both Bill Starkey of The Medical Protective Company and MGIS really makes a difference."

This year the guard changes at Searcy Medical Center, as Wayne retires to work on his golf game and spend more time with his grandchildren. Wayne's successor, Al Fowler, doesn't foresee any insurance changes. "I'm looking forward to working with The Medical Protective Company and MGIS," he says. "They've done a good job helping our clinic and our physicians deal with the realities of our business. We are all very comfortable with them."

The MGMA Group Professional Liability Program is underwritten by The Medical Protective Company, the nation's oldest professional liability underwriter. Founded in 1899, The Medical Protective Company has over one billion dollars in assets and a continuous A+ (Superior) rating from A.M. Best as well as a AA rating from Standard & Poor's.

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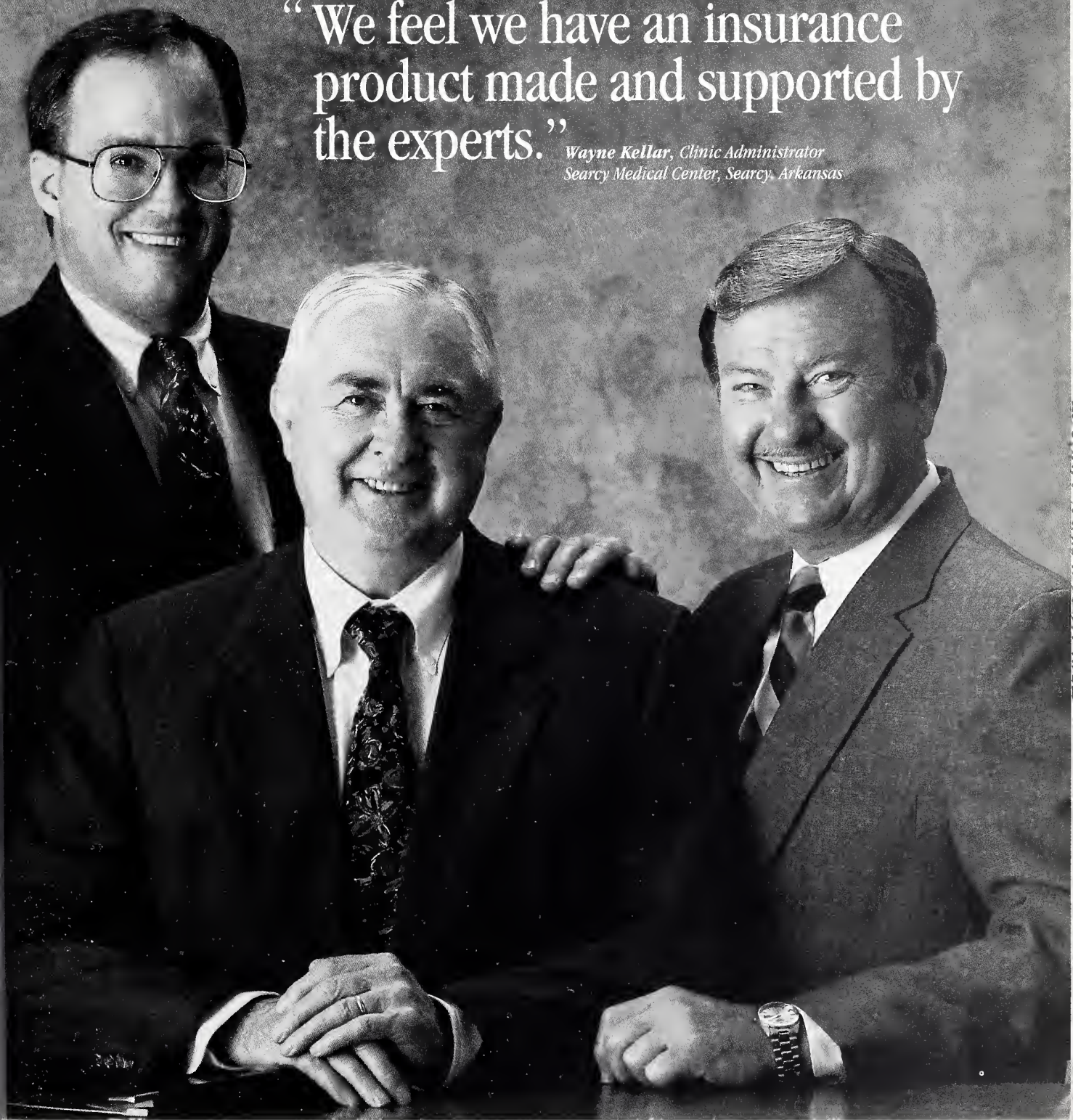
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Regarding the MGMA-sponsored professional liability plan, administered by MGIS and underwritten by The Medical Protective Company:

“We feel we have an insurance product made and supported by the experts.”

Wayne Kellar, Clinic Administrator
Searcy Medical Center, Searcy, Arkansas



In 1973 four internal medicine physicians joined four family practice physicians to form the Searcy Medical Center. In twenty years the group practice has grown to include 19 physicians and 66 employees, offering a wide range of medical services to the people of central Arkansas.

Pictured from left to right:

Al Fowler, of Searcy Medical Center; Wayne Kellar, of Searcy Medical Center; and Bill Starkey, of The Medical Protective Company.

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Arkansas Foundation for Medical Care Report

The Role of International Normalized Ratio (INR) in Clinical Practice

Marian Chen, M.D.*

William E. Golden, M.D.**

Longterm anticoagulation therapy is widely used in the United States for diseases of the cardiovascular system ranging from deep vein thrombosis, with or without pulmonary embolism, to abnormalities of cardiac structure and function. It is estimated that half a million Americans are undergoing anticoagulant therapy. The benefits and risks associated with anticoagulation are often determined by the patient's response to varying doses of medication. For this reason, careful monitoring of the extent of anticoagulation is necessary.

Chronic oral anticoagulation therapy has been managed traditionally by adjusting the dosage of warfarin until the measured prothrombin time (PT) is prolonged to an arbitrary end point. The PT is measured by adding a thromboplastin reagent and calcium to citrated plasma while observing the clotting time. Warfarin decreases the activity of the four vitamin K dependent procoagulant factors (II, VII, IX, and X), and the PT is sensitive to factors II, VII, and X. During the early administration of warfarin, the PT measurement primarily reflects the rapid depletion of Factor VII since it has the shortest half-life. Since several of the procoagulant factors have lengthy half lives, the prothrombin time does not reflect full anticoagulation until several days after the initiation of warfarin. Early prolongation of the PT occurs because of Factor VII depletion but is not reflective of adequate anticoagulation. Therefore, heparin is recommended to overlap warfarin initiation for the first several days of therapy.

PT measurement can lead to problems in monitoring warfarin as the number of reported seconds can

be different for the same degree of anticoagulation depending upon which thromboplastin reagent is used in the testing setting. Because of this variation in thromboplastin sensitivity, patients with the same degree of anticoagulation can have widely different results when monitored by different labs. This variation, hidden from the physician, can result in under and over anticoagulation and, therefore, increase the risk of iatrogenic hemorrhage or recurrent thromboembolism. The Third American College of Chest Physicians Consensus Conference of Antithrombotic therapy under the joint sponsorship of the National Heart, Lung, and Blood Institute, determined that the PT ratio (patient's PT divided by the control PT) is no longer a safe or adequate measurement for monitoring warfarin anticoagulation therapy.

In conjunction with the World Health Organization, the American College of Chest Physicians recommends the worldwide use of an international normalized ratio (INR). The INR represents a standardized value that allows the clinician to compare values from different laboratories, regardless of which PT system or thromboplastic source the laboratory uses in testing the sample, enables investigators to standardize anticoagulant therapy in clinical trials and scientific publications, and may decrease the risk of bleeding or thrombotic complications associated with orally administered anticoagulant therapy.

The INR corrects the PT ratios obtained with thromboplastin reagents of different degrees of responsiveness by standardizing the result against a common international reference preparation. This is done by the following equation.

$$INR = (Patient's PT / Mean Normal PT)^{ISI}$$

* Dr. Chen is Assistant Clinical Coordinator of the Arkansas Foundation for Medical Care, Inc., and Instructor of Medicine at UAMS.

** Dr. Golden is Principal Clinical Coordinator of the Arkansas Foundation for Medical Care, Inc., and Assoc. Professor of Medicine at UAMS.

Table 1**Recommended INR Therapeutic Ranges for Orally Administered Anticoagulant Therapy***

Clinical indication	BSH (1990)	ACCP- NHLBI (1989)
Prophylaxis of postoperative deep vein thrombosis (general surgery)	2.0-2.5	2.0-3.0
Prophylaxis of postoperative deep vein thrombosis during hip surgical procedures and fractures	2.0-3.0	2.0-3.0
Myocardial infarction, prevention of venous thromboembolism	2.0-3.0	2.0-3.0
Treatment of venous thrombosis	2.0-3.0	2.0-3.0
Treatment of pulmonary embolism	2.0-3.0	2.0-3.0
Transient ischemic attacks, prophylaxis	2.0-3.0	...
Tissue heart valves, prophylaxis	2.0-3.0	2.0-3.0
Atrial fibrillation, prophylaxis	2.0-3.0	2.0-3.0
Valvular heart disease, prophylaxis	2.0-3.0	2.0-3.0
Recurrent deep vein thrombosis and pulmonary embolism, prophylaxis	3.0-4.5	2.0-3.0
Arterial disease including myocardial infarction, prophylaxis	3.0-4.5	2.0-3.0
Mechanical prosthetic valves, prophylaxis	3.0-4.5	3.0-4.5
Recurrent systemic embolism, prophylaxis	3.0-4.5	3.0-4.5

*ACCP-NHLBI = American College of Chest Physicians and National Heart, Lung, and Blood Institute;
BSH = British Society for Haematology; INR = international normalized ratio.

ISI is the International Sensitivity Index which is obtained from the thromboplastin specifically being used. The ISI relates the PT ratio of the local reagent to the reference preparation and is a measure of the responsiveness of a given thromboplastin to reduction in vitamin K dependent coagulation factors. The lower the ISI, the closer the derived INR will be to the observed PT ratio. Manufacturers are responsible for providing information to labs regarding ISI values for each new lot of thromboplastin. Inaccuracies in the INR system have been found when thromboplastins with high ISI values are used. The use of reagents with low ISI values is recommended.

Although it has been known for over 30 years that thromboplastins vary markedly in their responsiveness and that the INR is a logical approach to monitoring anticoagulation, it is only used in a small percentage of laboratories in the United States. In one study, more than 70% of the laboratory supervisors had little or no understanding of the meaning of the terms ISI and INR and that only 5% reported the PT result of INR. In a 1993 AFMC study, only 20 hospitals in Arkansas were using INR; eight of those by special request only. Over 50 hospitals did not report INR at all. AFMC highly encourages those hospitals that have not been using INR in reporting PT results to adopt the INR

system and to educate medical staff on the importance of standardization. Lack of standardized reporting exposes patients to unnecessary risks for bleeding or thromboembolic events.

Optimal therapeutic ranges for oral anticoagulation have been set forth by the American College of Chest Physicians, the consensus panel of the National Heart, Lung, and Blood Institute, and the British Society for Haematology for various thrombotic conditions (Table 1). Guidelines have also been developed for responding to patients who are over anticoagulated depending on the measured INR (Table 2).

Conclusions

1. Traditional prothrombin time measurement varies from lab to lab depending on the thromboplastin reagent.
2. The International Normalized Ratio (INR) is now the recommended standard for measuring anticoagulation therapy.
3. INR is based on the ISI (International Sensitivity Index) of the thromboplastic reagent used in the lab setting. Use of low sensitivity thromboplastins with high ISI's should be discouraged.
4. Less than half of Arkansas hospitals were using INR in 1993. In view of the increasing use of warfarin to

Table 2

Recommendations for Reversal of Anticoagulation

1. If the INR is above the therapeutic range but below 6.0, the patient is not bleeding, and rapid reversal is not indicated for reasons of surgical intervention, then the next few doses can be omitted and warfarin commenced at a lower dose when the patient is in the therapeutic range.
2. If the INR is above 6.0 but below 10.0 and the patient is not bleeding, or more rapid reversal is required because the patient requires elective surgery, then vitamin K intravenously in a dose of 0.5 to 1 mg. can be given with the expectation that a demonstrable reduction of the INR will occur at 8 hours, and many patients will be in the therapeutic range of 2.0 to 3.0 in 2 hours. If the INR is still too high at 24 hours, the dose of 0.5 mg. can be repeated. Warfarin treatment can then be resumed at a lower dose.
3. If the INR is above 10.0 but below 20.0 and the patient is not bleeding, a higher dose of vitamin K of 3 to 5 mg. intravenously should be given with the expectation that INR will be reduced substantially at 6 hours. The INR should be checked every 6 to 12 hours, and vitamin K can then be repeated if necessary.
4. If a rapid reversal of an anticoagulant effect is required because of serious bleeding or major warfarin overdose (e.g. INR>20.0), vitamin K in a dose of 10 mg. should be given by intravenous injection and the INR checked every 6 hours. Vitamin K may have to be repeated every 12 hours and supplemented with plasma transfusion or factor concentrate depending on the urgency of the situation.
5. In the case of life threatening bleeding or serious warfarin overdose, replacement with factor concentrates is indicated supplemented with intravenously given vitamin K 10mg. to be repeated as necessary depending on the INR.
6. If continued warfarin therapy is indicated after high doses of vitamin K administration, then heparin can be given until the effects of vitamin K have been reversed, and the patient becomes responsive to warfarin.

care for patients with thromboembolic and cardiac conditions, patient care in Arkansas would probably improve from a more standardized method of measuring longterm anticoagulant therapy.

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State Health Watch

Information provided by the Arkansas Department of Health

NEW VACCINE INFORMATION

Varicella Vaccine

For the first time in the United States, a vaccine to protect persons from illness related to varicella zoster has been licensed for general use, raising to 10 the number of diseases among children that can be prevented through immunization.

Varicella (chickenpox) is highly contagious and the Centers for Disease Control (CDC) estimates that 4 million cases of varicella occur in children less than 15 years of age each year. They estimate that with more than 9,000 hospitalizations a year, the annual cost of caring for U.S. children of normal health who contract chickenpox was estimated as \$918 million in 1993.

At the June 28-29 CDC's Advisory Committee on Immunization Practices (ACIP) meeting, the following recommendations were approved:

Childhood Immunization Recommendations

Ages 12-18 months

All children should be routinely vaccinated between 12-18 months of age. Varicella virus vaccine may be given to all children at this age regardless of prior history of chickenpox; however, immunization is not necessary in children with reliable histories of chickenpox.

Ages 19 months through 12 years

Varicella vaccine is recommended for immunization of all susceptible children by the 13th birthday. Children who have not been previously immunized and who lack a reliable history of varicella infection are considered susceptible and should receive a single dose of varicella vaccine. After age 13, natural varicella is more severe, complications are more frequent, and two doses of vaccine are needed. Recently, the ACIP recommended establishing a routine adolescent immunization visit at age 11-12 years to review immunization status and deliver necessary immunizations. Varicella virus vaccine should be administered to susceptible children during this visit, but vaccination may be given any time during childhood.

Adolescent 13 years of age and older and Adults

Prioritization of groups for varicella immunity or vaccination:

Assessment of varicella immunity status, and vaccination of those who are susceptible is desirable for all adolescents and adults. Specific assessment efforts should be focused on those at higher risk of exposure and transmitting disease to others.

A. Vaccination is recommended for susceptible persons who will have close contact with persons at high risk for serious complications.

1. Health care workers

2. Susceptible family contacts of immunocompromised individuals

B. Vaccination should be considered for susceptible persons in the following groups who are at high risk of exposure:

1. Persons who live or work in environments in which there is a high likelihood of transmission of VZV (e.g., teachers of young children, day care workers and residents and staff in institutional settings).

2. Persons who live or work in environments where varicella transmission may occur (e.g., college students, inmates and staff of correctional institutions, and military personnel).

3. Nonpregnant women of childbearing age. Women should be asked if they are pregnant and advised to avoid pregnancy for 1 month following each dose of vaccine.

4. International travelers. Immunization should be considered for international travelers without evidence of immunity to VZV, especially if the traveler expects to have close personal contact with local populations, because varicella is endemic in most countries throughout the world.

C. Vaccination of other susceptible adolescents and adults:

Vaccination of other susceptible adolescents and adults is desirable and may be offered at the time of routine health care visits.

Persons aged 13 years and older should receive two doses of vaccine 4 to 8 weeks apart.

Hepatitis A Vaccine

Each year in the United States, an estimated 138,000 persons become infected with, and 100 persons die from hepatitis A. In the United States, hepatitis A costs an estimated \$200 million in medical and work loss annually. Arkansas has averaged 264 (ranging from 74 in 1993 to 608 in 1990) reported hepatitis A cases per year from 1983 through 1994.

A hepatitis A vaccine was recently licensed by the Food and Drug Administration (FDA) for use in the United States to provide long-term protection from hepatitis A and hepatitis A virus infection. An estimated 1.3 million persons have been vaccinated with hepatitis A vaccine in Europe and Asia. In almost all people, the vaccine produces immunity four weeks after the first dose, and persons can be considered protected at that time.

During their February 1995 meeting, ACIP recommended that the following groups be vaccinated, however, the final recommendations have not been published.

- Persons at risk of infection, as well as any person wishing to obtain immunity.
- Persons traveling to, or working in developing

countries. (Travelers should continue to avoid drinking water or ice of unknown purity and avoid eating uncooked shellfish, fruits and vegetables.)

- Persons living in communities with high levels of hepatitis A virus infection and periodic community-wide epidemics of hepatitis A.

- Injected drug users.
- Men who have sex with men.
- Persons with chronic liver disease.

The long-term objective of hepatitis A immunization is to lower the incidence of hepatitis A and eventually eradicate this infection. The committee's formal recommendations will be published in CDC's *Morbidity and Mortality Weekly Report* recommendations and reports series.

Hepatitis A vaccine should be administered by intramuscular injection. Primary immunization of adults consists of a single dose of 1440 EL.U. in 1 mL. Primary immunization for children (2 to 18 years of age) consists of 2 doses, each containing 360 EL.U. in 0.5 mL given 1 month apart. A booster dose is recommended anytime between 6 and 12 months after the initiation of the primary course in order to ensure the highest antibody titers.

CHLAMYDIA ADDED TO THE LIST OF REPORTABLE DISEASES IN ARKANSAS - LIMITED SCREENING FOR CHLAMYDIA TO BE PERFORMED IN SELECTED LOCAL HEALTH UNITS

Chlamydia trachomatis infections often occur without symptoms, and detection depends on screening tests conducted during routine medical examinations. Up to 75% of women and 25% of men with uncomplicated chlamydial infection experience no symptoms.¹ Women who are symptomatic describe an abnormal discharge; they may also experience a burning sensation during urination. The most common symptom in men is dysuria, which occurs 7 to 10 days after infection. Men may also experience a discharge from the penis. Symptomatic rectal infections are characterized by proctitis.

It is estimated that chlamydial infections are four times greater than gonorrhea, with an annual U.S. incidence rate estimated at 4 million.² In the United States, an estimated 40% of cases of pelvic inflammatory disease (PID) are caused by chlamydia. Chlamydia infections often result in serious complications, such as pelvic inflammatory disease, infertility, and ectopic pregnancy. In addition, infected pregnant women can infect their babies during delivery. Chlamydial PID is more likely to be milder than PID caused by gonorrhea; as a result, women may not seek medical care or may not be diagnosed with PID. Often, the first indication of chlamydial infection occurs when a woman has infertility problems or has an ectopic preg-

nancy. Some studies suggest that chlamydia infection, like gonorrhea and syphilis, increases the risk of HIV transmission.¹

Perinatal chlamydial infections are the most common cause of neonatal conjunctivitis and are a frequent cause of infant pneumonia, which may predispose a child to respiratory problems later in life.¹

On July 27, 1995, the Arkansas Board of Health approved a proposal to add chlamydia to the list of reportable diseases. In the past, chlamydia reporting was encouraged, but was done on a voluntary basis and did not represent the true rate of infection. The current rate can only be estimated from a 1986 pilot study on women requesting Arkansas Department of Health Family Planning or STD services in selected counties in Arkansas. The study concluded that 18% of women tested positive for chlamydia in Family Planning clinics and 32% tested positive for chlamydia in STD clinics. Overall, an approximate 25% positivity rate was found in women requesting services through the Arkansas Department of Health during that period in those counties. Until now, no other study has been conducted to assess the amount of chlamydia in patients requesting services through the Arkansas Department of Health clinics or in the private sector.

The chlamydia tests offered through the Arkansas

Dept. of Health, will be performed at the same time the gonorrhea test, during the clinic visit, utilizing the gen probe DNA method of detection. The test will be sent to the State Health Department Laboratory to be processed. Due to extremely limited funding, chlamydia testing will only be available in selected County Health Department Clinics. They are as follows: Crittenden, Garland, Mississippi, Pulaski and Ouachita counties. Currently, we are unable to offer chlamydia testing to private providers wanting to utilize the Arkansas Department of Health Laboratory services. However, contingent on adequate funding, it is hoped that this service can be offered in all Public Health

Clinics and to private providers.

Medical personnel should begin reporting cases to the Arkansas Department of Health by calling the toll free code-a-phone reporting system at 1-800-482-8888. When using the code-a-phone please indicate the physicians name, patient's name, address, date of birth, race, sex, date of test results and treatment, if any.

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Reported Cases of Selected Reportable Diseases in Arkansas Profile for June 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases June 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	22	76	67	67	187	130
Giardiasis	4	44	42	55	126	150
Shigellosis	10	60	89	61	193	201
Salmonellosis	22	92	113	133	534	402
Hepatitis A	47	167	47	38	253	74
Hepatitis B	5	28	27	49	60	90
HIB	0	3	2	8	6	8
Meningococcal Infections	0	21	33	20	55	27
Viral Meningitis	1	6	39	32	62	79
Lyme Disease	3	6	11	6	15	8
Rocky Mountain Spotted Fever	3	14	7	5	18	17
Tularemia	7	16	17	24	23	36
Measles	0	2	1	0	5	0
Mumps	0	3	4	7	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	490	2532	3749	3188	7078	7590
Syphilis	107	826	725	863	1324	1612
Legionellosis	0	1	10	5	16	6
Pertussis	5	14	23	8	33	17
Tuberculosis	15	106	119	84	264	209

Arkansas HIV/AIDS Report

1983-1995

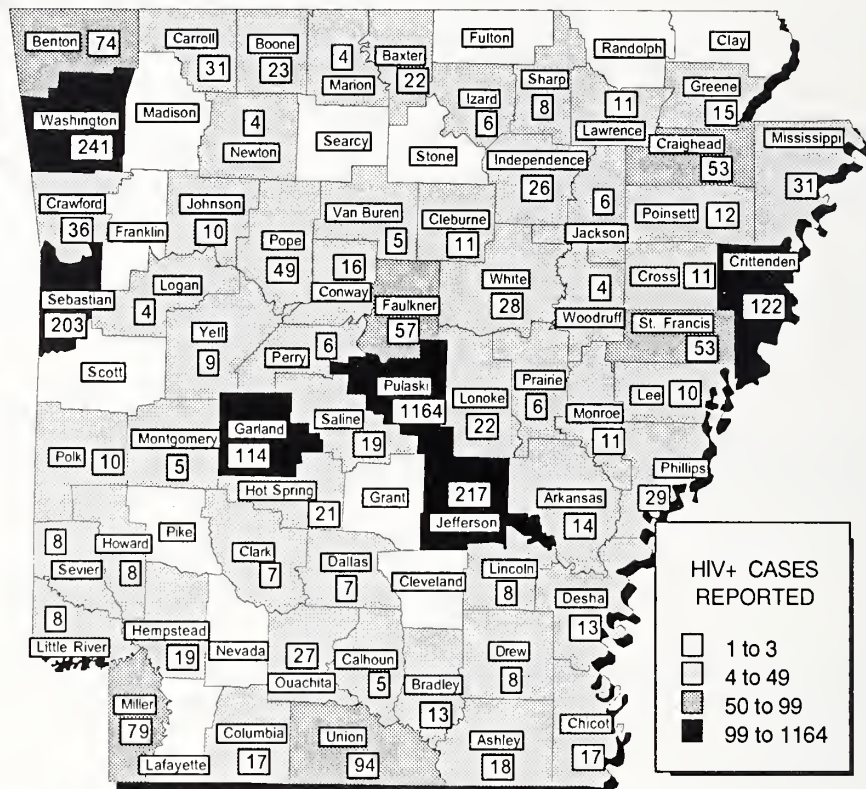
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



County of residence at the time of test for the 3,256 Arkansans reported to be HIV+. (7/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	217	2,704	83
	Female	8	26	37	68	85	81	94	90	63	552	17
AGE	<5	1	1	2	8	13	6	3	7	1	42	1
	5-12	0	1	1	5	1	2	1	0	0	11	0
	13-19	0	7	8	14	19	25	11	22	8	114	4
	20-29	33	110	123	183	149	156	175	145	82	1,156	36
	30-39	44	86	104	196	208	179	168	171	114	1,270	39
	40-49	22	25	35	56	70	67	65	77	50	467	14
	>49	8	6	11	17	22	38	23	35	25	185	6
RACE	White	87	170	174	328	298	291	277	258	175	2,058	63
	Black	21	69	106	151	184	173	163	183	97	1,147	35
	Other/Unknown	0	2	5	2	3	9	6	16	8	51	2
RISK	Male/Male Sex	64	137	140	243	245	260	241	227	85	1,643	51
	Injection Drug User (IDU)	13	30	48	73	96	75	64	71	29	500	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	11	222	7
	Heterosexual	5	25	26	60	65	68	100	87	27	461	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	2	42	1
	Undetermined	1	20	35	41	23	12	9	37	125	303	9
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	280	3,256	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995

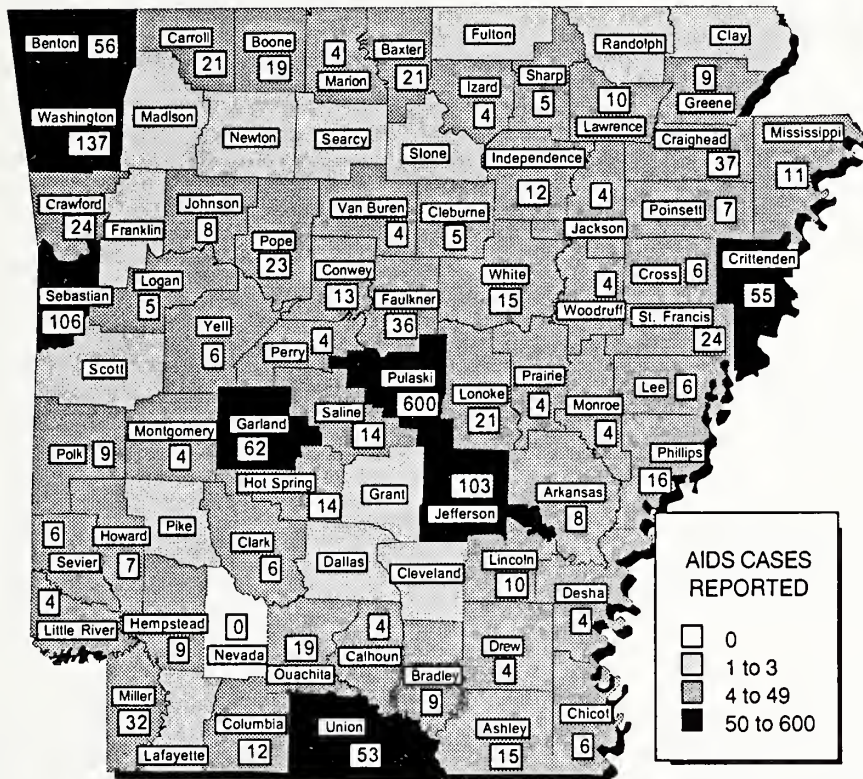
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Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



Of the 3,256 Arkansans reported to be HIV+, 1,792 have been diagnosed with AIDS. (7/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	148	1,565	87
	Female	5	6	10	20	25	35	64	42	20	227	13
AGE	<5	0	1	1	6	6	3	2	1	1	21	1
	5-12	0	1	0	1	1	0	1	0	1	5	0
	13-19	0	0	0	4	3	2	4	3	0	16	1
	20-29	31	27	24	55	57	81	110	67	34	486	27
	30-39	39	36	41	78	80	128	178	133	75	788	44
	40-49	15	10	7	35	41	52	78	61	34	333	19
	>49	5	8	7	11	13	19	27	30	23	143	8
RACE	White	74	61	58	141	134	206	275	190	109	1,248	70
	Black	16	20	21	47	66	75	121	102	56	524	29
	Other/Unknown	0	2	1	2	1	4	4	3	3	20	1
RISK	Male/Male Sex	55	59	50	122	120	182	237	162	85	1,072	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	24	259	15
	Male/Male Sex & IDU	16	6	6	18	17	21	26	23	7	140	8
	Heterosexual	5	3	7	11	12	24	52	40	12	166	9
	Transfusion	2	7	3	7	11	3	2	4	2	41	2
	Perinatal	0	1	1	6	6	3	3	1	1	22	1
	Hemophiliac	0	1	1	5	5	4	5	6	4	31	2
	Undetermined	0	2	1	3	1	3	5	13	33	61	3
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	168	1,792	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

BENTON

Cathcart, Evelyn Louise, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, AHEC-NW, 1993/1995. Board eligible.

BLYTHERVILLE

Grissom, David B., Internal Medicine. Medical Education, UAMS, 1992. Internship, USA Medical Center, Mobile, Alabama, 1993. Residency, USA Medical Center.

EL DORADO

Ekanem, Felix M., Family Practice. Medical Education, UTESA, Santo Domingo, Dominican Republic, 1988. Residency, AHEC-El Dorado, 1995.

FOREST CITY

Merritt, James Milton, Addiction Medicine. Medical Education, UAMS, 1971. Internship, Pensacola Educational Program, 1972. Residency, Oakland Naval Regional Medical Center, 1976.

FORT SMITH

Ibrahim, Manar S.A., Pediatrics. Medical Education, University of Cairo, Egypt, 1985. Internship/Residency, Children's Hospital of Oklahoma, 1993/1995. Board pending.

Meade, Arturo, Internal Medicine. Medical Education, Autonomous University of San Luis Petosi, Mexico, 1989. Internship/Residency, Medical College of Pennsylvania, 1995.

Osborn, Daniel Roland, Ophthalmology. Medical Education, Indiana University, 1991. Internship, Methodist Hospital of Indianapolis, 1992. Residency, Indiana University, 1995.

Schkade, Paul A., Allergy/Immunology. Medical Education, University of Texas Medical Branch, Galveston, 1985. Internship/Residency, Brooke Army Medical Center, 1986/1988. Board certified.

Woodson, Mark Robert, Family Practice. Medical Education, University of Oklahoma College of Medicine, 1992. Internship/Residency, AHEC-Fort Smith, 1993/1995.

HOT SPRINGS

Vallery, Samuel Wilson, Otolaryngology. Medical Education, University of Missouri Columbia School of Medicine, Columbia, 1990. Internship, University of Missouri, Columbia, 1991. Residency, University of Missouri Hospitals and Clinics, 1995.

Warren, Edward Taliaferro, Cardiothoracic Surgery. Medical Education, University of Mississippi Medical School, Jackson, 1976. Internship, University of Mississippi Medical School, 1978. Residency, University of Mississippi Medical School, 1982, and Medical University of South Carolina, 1984. Board certified.

JONESBORO

Perry, Evelyn S., Pathology AP/CP. Medical Education, University of Mississippi School of Medicine, Jackson, 1990. Residency, University of Mississippi Medical Center, 1995.

Williams, Anthony Wayne, Internal Medicine. Medical Education, UAMS, 1991. Internship/Residency, Vanderbilt University, 1992/1994. Board certified.

LITTLE ROCK

Adametz, Kimberly Grimes, Physical Medicine and Rehabilitation. Medical Education, UAMS, 1989. Internship, UAMS, 1990. Residency, UAMS, 1995. Board eligible.

Cherny, W. Bruce, Pediatric Neurosurgery. Medical Education, University of Arizona College of Medicine, Tucson, 1987. Internship, Phoenix Integrated Surgical Residency, 1988. Residency, Barrow Neurological Institute, Phoenix, Arizona, 1994. Board pending.

Kennedy, Robert Bruce, Family Medicine. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995.

Mazursky, Jon Eric, Pediatrics/Neonatology. Medical Education, Emory University School of Medicine, Atlanta, Ga., 1989. Internship/Residency, University of Arizona, Tucson, 1990/1992. Fellowship, University of Iowa, Iowa City, 1995. Board certified, Pediatrics; Board eligible, Neonatal/Perinatal Medicine.

Nguyen, Duong H., Psychiatry. Medical Education, UAMS, 1988. Internship/Residency, UAMS, 1989/1992. Board certified.

Wood, W. Rebecca, Pediatric Emergency Medicine. Medical Education, University of Arizona College of Medicine, Tucson, 1989. Internship/Residency, Phoenix Children's Hospital, 1990/1992. Board certified.

Yee, Suzanne W., Facial Plastics/OTO/HNS. Medical Education, UAMS, 1989. Internship/Residency, UAMS, 1990/1994. Board certified.

NORTH LITTLE ROCK

McCoy Julia M., Neurology. Medical Education, UAMS, 1989. Internship, University of Tennessee, 1990. Residency, Tulane University, 1993. Board certified.

POCAHONTAS

Corcoran, Gavin Richard, Internal Medicine/Infectious Disease. Medical Education, University of Witwatersrand, Johannesburg, South Africa, 1987. Internship/Residency, University of Texas HSC at San Antonio, 1990/1992. Board certified.

SPRINGDALE

Simpson, Todd Richard, Family Practice. Medical Education, University of Medical and Health Sciences, Des Moines, Iowa. Internship/Residency, AHEC-NW, 1993/1995.

RESIDENTS

Adametz, John H. Medical Education, UAMS, 1995. Internship, UAMS, 1996.

Cash, David Lee. Medical Education, UAMS, 1995.

Cisneros, Teresa C., Psychiatry. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1994/1998.

Holleran, John Richard, Family Practice. Medical Education, Universidad Tecnologia De Santiago, Dominican Republic, 1957. Residency, AHEC-El Dorado.

Jackson, Charles Andrew, Family Practice. Medical Education, UAMS, 1995. Residency, AHEC-NE, 1998.

Phillips, Rebecca Plumlee, Family Medicine. Medical Education, UAMS, 1995. Residency, AHEC-Pine Bluff, 1998.

Rouse, Kevin Glenn, Medicine/Pediatrics. Medical Education, UAMS, 1995. Residency, UAMS, 1999.

Sarinoglu, Cem, Obstetrics/Gynecology. Medical Education, Ege University Medical School, Izmir, Turkey, 1986. Internship/Residency, University of Tennessee, Memphis, 1993/1996.

Stellpflug, Bradley Steven, Family Practice. Medical Education, University of Osteopathic Medicine and Health Sciences, Des Moines, Iowa, 1994. Internship, Des Moines General Hospital, 1995. Residency, AHEC-Pine Bluff.

Thompson, Rodney Lee, Family Practice. Medical Education, Loma Linda University School of Medicine, Loma Linda, Calif., 1995. Residency, UAMS.

Trevillyan, M. Jeanine, Surgery. Medical Education, UTESA, Dominican Republic. Internship, Marshall University Medical School, Huntington, West Virginia. Residency, UT, Knoxville, Tennessee.

Walker, Brent Lee, Anesthesiology. Medical Education, UAMS, 1995. Internship/Residency, UAMS, 1996/1999.

Watson, Robert Allen. Medical Education, UAMS, 1995.

Williams, Robert S., Family Practice. Medical Education, University of the Caribbean, Montserrat British West Indies, 1991. Residency, AHEC-El Dorado.

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Outdoor MD

Information provided by
the Arkansas Game & Fish Commission

Federal and State Duck Stamps for 1995-96 are on Sale

United States and Arkansas duck stamps for 1995-96, officially named migratory waterfowl hunting stamps, are on sale. The stamps are required for persons hunting ducks and geese anywhere in Arkansas, and the funds from both are earmarked for acquiring and maintaining waterfowl habitat. The federal duck stamp program began in 1934, and Arkansas started its duck stamp program in 1981.

Federal stamps cost \$15. The Arkansas stamp is \$7 for residents, \$12 for the non-resident permit. Both federal and state are valid through June 30, 1996.

This year's federal duck stamp depicts mallards, with the artwork painted by Minnesota artist Jim Hautman, who painted the art for the 1992-93 Arkansas stamp. Michigan wildlife artist Larry Hayden provided the artwork for Arkansas' 1995-96 stamp. The Arkansas scene is of a pair of mallards on the White River. Hayden also was Arkansas' duck stamp artist in 1984-85.

Collectors Prints Also on Sale

Along with being required of hunters, the federal and state stamps are popular collectors items. Special albums, along with stamps from previous years, are available from stamp dealers. Collectors prints of the new stamps' artwork, signed by the artists and numbered, are also on sale. Prices for the prints begin at \$142.

For information on Arkansas duck stamp prints, contact Grisham's Art in Jonesboro, 972-6050 or 1-800-232-2409. A portion of the print sales revenue goes to the Arkansas Game and Fish for wetlands habitat projects.

Arkansas' Program on Top

The Arkansas Duck Stamp Program has been acclaimed as one of the top state stamp programs in the United States. From our selection of artists, to the amount of money raised for government use, on a per capita basis, Arkansas' performance far exceeds the rest. Since the program began in 1981, \$4.8 million has been raised and used for waterfowl research and the acquisition of land, thus, creating safe refuges for Arkansas' abundant wildlife. The 1995-96 stamp of a classic pair of Arkansas Mallards by Larry Hayden marks the 15th anniversary of The Arkansas Duck Stamp Program.



AN EMERGENCY ROOM SHORT STORY

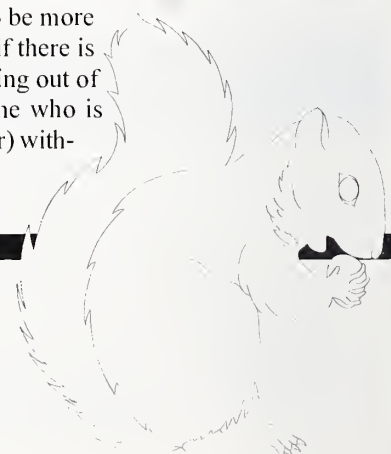
by Robert A. Floss, M.D.

Medical Director of Cabun Rural Health Services in Hampton

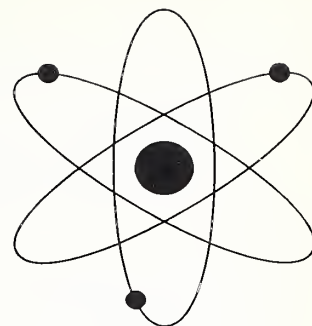
There were seven squirrels in Mr. Johnson's pouch when we removed it from his back in the ER trauma room. The big red fox squirrel whose tail hung limply out of the top of the pouch most likely was the culprit. Mr. Johnson had been squirrel hunting most of the afternoon with his son-in-law in a densely forested area in South Arkansas. Their weapons of choice were 12 gauge shotguns with #6 shot shells. Mr. Johnson's son-in-law appeared both dejected and anxious when questioned about how the accident happened.

"The brush was very heavy in the area where we were hunting. My father-in-law and I became separated in a dense thicket. The sun was slowly setting and the shadows lengthening as I pushed into a clearing. I heard our dog start to bark and saw the tail of a large fox squirrel flicking through a large brush overgrowth. I was not able to see the whole squirrel so I aimed just in front of the tail. I didn't mean to shoot him," he cried as tears rolled up in his eyes. "Will he be all right?"

Mr. Johnson was stabilized and treated in the emergency room. Most of his wounds were superficial with the possible exception of his pride. His son-in-law was relieved when we informed him of his condition and vowed to be more careful when hunting. I guess the moral of this story, if there is one, is "don't hunt with the tail of a fox squirrel sticking out of your game bag or better yet don't hunt with someone who is willing to shoot at the tail of a squirrel (extrapolate Deer) without seeing the actual body."



Radiological Case of the Month



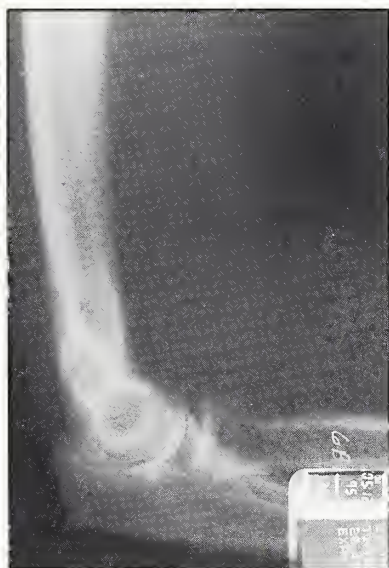
David L. Harshfield, M.D.
Kelly G. Grigg, B.S.

History:

A 25 year old male who injured elbow in a fall from a height is presenting with pain laterally with limitation of pronation and supination.



Figures 1 & 2



Figures 3 & 4

Radial head fracture

Findings:

Figures 1 and 2 demonstrate an AP and lateral view of the elbow. No visible fracture is apparent, however there is a posterior fat pad present on the lateral view. Figures 3 and 4 are follow-up films 10 days later and reveal an obvious radial head fracture.

Discussion:

Interpreting radiographs for evaluation of elbow trauma is difficult because of the combination of the complex anatomy and the obscure nature of some injuries. It is an excellent practice to examine the patient personally and determine where the patient is experiencing pain and the nature and degree of limitation of motion. In the absence of succinct knowledge regarding clinical history, subtle abnormalities can be "under-called." The initial examination of an elbow consists of an AP and lateral projection. The AP view should be obtained with the forearm supinated and the elbow in as full extension as possible. The lateral view should be obtained with the elbow in 90 degree flexion. Internal and external oblique projections with the forearm in full extension are helpful, disclosing otherwise inapparent injuries. A disciplined approach markedly decreases the chance of oversight of subtle injuries. The radiograph should not simply be viewed, but analyzed to search for specific findings or clues to the correct diagnosis.

The only indication of this radial head fracture on initial views was the presence of a posterior fat pad. The fat pad sign was first described by Norell in 1954. A thin layer of fat overlies both the anterior and posterior aspects of the elbow joint capsule. The posterior fat pad lies in the shallow intercondylar depression on the posterior surface of the humerus and is invisible on the normal lateral radiograph. The anterior fat pad is seen in most normal elbow series. Elbow joint distension of any origin (hemorrhagic, inflammatory, or traumatic) will give rise to a positive fat pad sign so that the fat pad sign is not specific for trauma. Over 90%, of children and adolescents with a posterior fat pad sign prove to have a demonstrable fracture. The sign is less frequently seen in the adult and therefore its absence cannot be used to exclude a fracture. If a posterior fat pad sign is demonstrated in the injured adult elbow, however, the likelihood of fracture is high. Fracture involving the head and neck of the radius is the most common elbow fracture in adults. It occurs as a result of a fall on the out-stretched hand which creates an impaction of the radial head against the capitellum. The elbow is frequently forced into valgus and the lateral margin of the radial head is therefore most likely fractured. Frequently, the fracture fragment is not displaced and the fracture line may then be obscure and not readily visualized on the AP or lateral projections. The clinical clue to the presence of a fracture is the inability of the patient to supinate or pronate the forearm.

Bibliography:

Norell HG: Roentgenologic visualization of the extracapsular fat, its importance in the diagnosis of traumatic injuries to the elbow. *Acta Radiol* 42:205-210, 1954.

Eppright RH, Wilkins KE: Fractures and dislocations of the elbow, in Rockwood CA Jr., Green DP (eds): *Fractures*, vol. 1. Philadelphia, JB Lippincott, 1975, p 487.

Editor: David Harshfield, M.D., is Director of Radiology at Riverside Radiology Group in North Little Rock & Clinical Associate Professor of Radiology at UAMS.

Contributor: Kelly Grigg is a premedical student research assistant at UAMS.



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Little Rock Hilton

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Tina G. Wade
Managing Editor
The Journal of the Arkansas Medical Society
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Dr. John D. Ashley, of Newport, recently completed an acrylic mural that is six feet high and ten feet long on the wall in the breezeway entrance at Newport Hospital. The mural is on canvas and took 12 to 14 hours to complete.

Dr. Leon Blue, a cardiologist in Searcy, recently returned from a mission in Africa where he set up clinics in primitive, rural villages. He and other members of a medical missions team examined and treated more than 1,300 patients ranging in age from a few months to extremely aged.

Dr. Rick Casey recently received the American College of Obstetricians and Gynecologists Recognition Award for completing requirements for this present academic term in the program for Continuing Professional Development.

Dr. Scott Dinehart, of UAMS, recently discussed "Updates on Skin Cancer" with a group of other medical professionals in a special program at Methodist Hospital of Jonesboro. **Dr. Charles D. Rice**, of UAMS, recently discussed "Red Eye and Eye Injuries" at the Little Rock Air Force Base hospital. The lectures are part of the outreach program begun in 1990 by UAMS Medical Center and UAMS College of Medicine. The program offers continuing education to Arkansas physicians, particularly those in rural areas who may not have the opportunity to attend seminars in Little Rock.

Dr. Jim English, a Little Rock Facial Plastic Surgeon, recently participated in the administration of the oral and written examinations for the American Board of Facial Plastic and Reconstructive Surgery in Washington, D.C. for the sixth year in a row. Nationwide, only 24 facial plastic surgeons were appointed to administer the exams this year.

Dr. James S. Garrison, Jr., was recently honored at a retirement reception at Conway Regional Medical Center after more than 24 years of community service. A scholarship fund was set up in his name by his patients, friends and the hospital to benefit students interested in health careers in Faulkner County.

To encourage regular scheduling of mammograms and other health care precautions for women, **Dr. E.J. Jones**, of Batesville, was one of two health care specialists who recently addressed the Independence County Chapter of the American Association of Retired Persons.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of July are:

Paul Martin Fiser	Little Rock
David B. Fraser	El Dorado
Bernard Douglas Stokes	Little Rock
Douglas Eugene Young	Little Rock

Dr. Robert Landry, a Jonesboro ophthalmologist, recently returned from a 10-day mission in Bulgaria where while helping to train Bulgarian doctors he operated on at least 50 Bulgarians, including the Patriarch of the Eastern Orthodox Church. "The Patriarch is kind of like the Pope to them," he said of the Bulgarians, 90 percent of whom belong to that religion.

Dr. Peter Thomas, director of medical affairs at Southwest Hospital in Little Rock, was featured in the July 23, 1995, High Profile section of the *Arkansas Democrat-Gazette* newspaper. In the article, Dr. Thomas - who celebrated his eightieth birthday this year - commented, "I'm working with people half my age and younger. It keeps you alive. Working with them is great fun."

Medicine in the News

Health Care Access Foundation

As of August 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 9,594 medically indigent persons, received 17,934 applications and enrolled 35,848 persons. This program has 1,688 volunteer health care providers including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

In Memoriam

Caswell Macon Thompson Kirkman, M.D.

Dr. Caswell Macon Thompson Kirkman, of Helena, died Thursday, August 3, 1995. He was 73. Survivors include two sons; two daughters, and three grandchildren.

Frank Rhodes, M.D.

Dr. Frank Rhodes, of Osceola, died Wednesday, June 14, 1995. He was 71.

Domestic Violence... *It affects us all.*

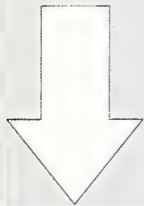
as a physician, a spouse, a parent, a friend

there's something you should know

about domestic violence,

it can happen to anyone.

You may not want to miss the special October issue of *The Journal*. Here are some reasons why.



I made a mistake once of trying to run from him. He was drunk. I thought I could get away. He caught me, put a double barrel shot gun, cocked, to my temple and walked me back home. You can never know the fear that I felt those few moments. Fear plays a major role in the way a woman reacts to violence. Not only for herself, but for other family members. My father lived about half a mile from us. My ex-husband would go out with a gun and tell me if I tried to leave he would shoot my father when he came home. Several nights he would sit outside with a gun.

anonymous

Excerpt from an article that will appear in our special October issue on domestic violence.

October is National Domestic Violence Awareness Month

With the assistance of the AMS Alliance, The October Issue of *The Journal of the Arkansas Medical Society* will be dedicated to Domestic Violence.

In this very important issue, packed full of valuable information as well as heartfelt stories, physicians will gain insight and more awareness on the issue of domestic violence and how it affects Arkansans. In addition, physicians will learn how to pinpoint the signs of abuse in a patient.

According to Attorney Donn Mixon of Jonesboro, "Physicians are frequently the first professionals with the opportunity to encounter the victim of domestic abuse." Mixon will address the role physicians play and guidelines a physician may follow in the unfortunate case of treating a patient of domestic violence.

So watch for the October issue, it will feature many more authors and topics of domestic violence that are valuable to you and other medical professionals.

Things To Come

October 5 - 7

Contemporary Cardiothoracic Surgery. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

October 8 - 12

Medical Oncology Board Review Course. The Ritz-Carlton Pentagon City, Arlington, VA. Sponsored by the Office of Continuing Medical Education, The George Washington University Medical Center. For more information, call (202) 994-4285.

October 13 - 14

MESA-ACEP Business of Emergency Medicine Seminar. Jackson Hole, Wyoming. Sponsored by the Medical Emergency Service Associates. For more information, call (708) 925-8300.

October 13 - 15

"Advances in Sonography," - a fourth annual post-graduate educational course. Sheraton Chicago Hotel and Towers, Chicago, Illinois. Sponsored by the Center for Bio-Medical Communication. Designated for 17.75 credit hours of Category 1 of the Physician's Recognition Award. For more information, call (201) 385-8080.

October 26 - 27

FREE - "Molecular Medicine: Cytokines in Health and Disease" Symposium. The University of Texas Southwestern Medical Center at Dallas. Sponsored by the Southwestern Medical Foundation. For more information, call (214) 648-3599.

November 2 - 4

American Cancer Society National Conference on Colorectal Cancer. Chicago Marriott Downtown, Chicago, Illinois. Sponsored in part by the Centers for Disease Control and Prevention. For more information, call (404) 329-5788.

November 3-5

7th Annual Infectious Disease Review Course for the Practicing Physician. Hyatt Regency Bethesda in Bethesda, Maryland. Sponsored by The Society of Radiologists in Ultrasound. For more information, call (201) 385-8080.

November 9 - 10

21st Annual Update on Obstetrics & Gynecology. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Washington University School of Medicine and the Office of Continuing Medical Education. For more information, call (800) 325-9862.

November 11

Issues in the Management of the Complicated Diabetic Patient. Chateau Sonesta Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center and the Office of Continuing Medical Education. For more information, call (800) 588-5300.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

December 15 - 18

Ethical Issues in the Care of Terminally Ill and Dying Patients. The Rolling Hills Hotel & Golf Resort, Ft. Lauderdale, FL. Sponsored by the CEREC Center of Southeast Florida. For more information, call (305) 424-9304.

January 12 - 13, 1996

What's New In General Surgery - 18th Annual Postgraduate Course. Hyatt Regency, Sacramento, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

October 5 - 7

Annual Meeting of the Arkansas Association of Ophthalmology

Sponsored by UAMS College of Medicine,
Department of Ophthalmology
Location: Inn of the Ozarks, Eureka Springs
For more information, call (501) 661-7962

October 26 & 27, 1995

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Arkansas High Risk Pregnancy Program's Twelfth Annual Conference on Perinatal Care

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October 14

Pediatric Orthopaedic Overview for PCPs

Sponsored by UAMS College of Medicine,
Department of Pediatrics and Arkansas
Children's Hospital

Location: Arkansas Children's Hospital
For more information, call (501) 661-7962

Update in Primary Care Geriatrics

Washington Regional Medical Center
CME Activity Dates:

Saturday, October 7 - 8 a.m. - 10:30 a.m.

Saturday, November 11 - 8 a.m. - 10:30 a.m.

*These dates coincide with the Fayetteville
Razorback football games. Tickets for the games can
be obtained by calling 1-800-982-HOGS (4647).
For more information about the conference,
call (501) 442-1823.*

October 27 - 28

Re-engineering Healthcare in Arkansas - A Roadmap to the 21st Century

Sponsored by Baptist Medical Center
Location: Statehouse Conference Center

October 28 - 29

Computed Topography of the Body Annual Fall Meeting of the Arkansas Chapter of the American College of Radiology

Sponsored by UAMS College of Medicine,
Department of Radiology
Location: UAMS Education III Building
For more information, call (501) 661-7962

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Joint Tumor Conference, 1st Wednesday, 12:00 noon, CARTI Auditorium. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

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Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
GI Conference, 4th Friday, 11:30 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

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Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
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Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
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Neurology-Neuradiology Conference, Wednesday's, 5:15 p.m., Radiology Conference Room at UAMS
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
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OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
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Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
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Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

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Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

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Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conference, October 26 and December 28, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
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Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
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Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
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Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

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Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
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Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

Advertisers Index

Advertising Agencies in italics

AMS Benefits	inside back
American Physicians Insurance Exchange	inside front
Arkansas Managed Care Organization	169
Care Network	153
<i>The Alan Rothman Company, Inc.</i>	
Freemyer Collection System	175
Medical Arts Laboratory	163
Medical Protective	176
<i>Williams Marketing Services</i>	
Riverside Motors, Inc.	158
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	back cover
<i>Strategic Marketing</i>	
State Volunteer Mutual Insurance Company	154
<i>The Maryland Group</i>	
U.S. Air Force	157
<i>BJK&E Specialized Advertising</i>	
U.S. Army Reserve	168
<i>Young & Rubicam</i>	
U.S. Army Active	172
<i>Young & Rubicam</i>	



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Volume 92 Number 5

October 1995

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...SICIAN, WHAT CAN YOU DO FOR YOUR PATIENTS WHO ARE
...OF ABUSE? SEE PAGE 213

...ING & TREATING VICTIMS OF DOMESTIC VIOLENCE. SEE PAGE 215

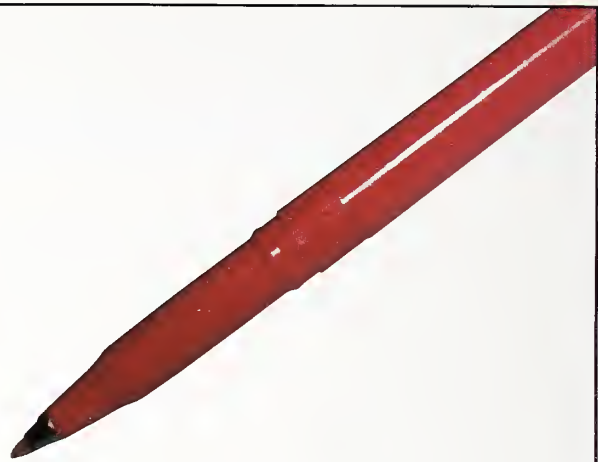
...THE DOMESTIC ABUSE ACT? SEE PAGE 218

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 5

October 1995

CONTENTS

FEATURES

- 204 **What's This About?**
Editorial
Samuel E. Landrum, M.D., F.A.C.S.
- 209 **The Physician's Responsibility and Domestic Violence**
Guest Editorial
Rosey Seguin-Calderon, M.D.
- 211 **A Survivor's Personal Experience with Domestic Violence**
Anonymous
- 213 **A Physician's Personal Experience with Domestic Violence**
Joe Stallings, M.D.
- 214 **From One Physician to Another: The indiscrimination of domestic violence & what one physician is doing to help heal the scars**
Jim English, M.D., F.A.C.S.
- 215 **Recognizing & Treating Victims of Domestic Violence**
- 218 **YOU AND THE LAW The Domestic Abuse Act: The Physician's Role**
Donn Mixon
- 222 **Familial Variables and Domestic Violence**
Tracy Matlock
John R. Slate
David A. Saarnio
- 226 **AMS Alliance Health Project Report**
- 229 **Facts About Domestic Violence**
- 232 **Arkansas Domestic Violence Referral Numbers**
- 239 **Loss of Chance**
Loss Prevention Case
J. Kelley Avery, M.D.

DEPARTMENTS

- 240 **Cardiology Commentary & Update**
- 244 **State Health Watch**
- 250 **Arkansas HIV/AIDS Report**
- 252 **New Members**
- 253 **Radiological Case of the Month**
- 255 **Medicine in the News**
- 255 **AMS Newsmakers**
- 256 **In Memoriam**
- 257 **Things to Come**
- 259 **Keeping Up**

Cover design of house is from the Northeast Arkansas Council on Family Violence statewide campaign

What's This About?

Samuel E. Landrum, M.D., F.A.C.S.*

"Why don't you go over there and stop that?" asked a customer of the mechanic in the back door of an implement shop as they watched a man beating his wife in their back yard across an alley.

"Maybe she deserves it," the respected mechanic replied.

Fifty years ago this true story was shared in polite parlor conversations more in pride that the mechanic had not poked his nose into others' affairs than by engendering any idea that domestic abuse was not tolerable in a community of respectable citizens.

When my wife of a few weeks playfully tossed cold water on me in the shower, I reflexly swatted her with my hand. She promptly informed me that, that would be the only time she would tolerate being struck and remain being married to me. The information stuck for now over forty years to our mutual benefit.

Surgeons usually see patients who are victims of more striking domestic abuse. Gunshot wounds and stabbings have been the preferred methods by wives and girlfriends inflicting wounds on men in my experience. It seems the groin area is their most frequent target zone; whereas, wounds perpetrated by jealous men seem to be directed toward the vital organs of the chest and upper abdomen. Women whom I have seen were mostly injured by blunt methods such as brutal beatings or being tossed around. These injuries, although not immediately as life threatening as gunshot wounds and stabbings, are undoubtedly longer lasting in the context of a miserable life.

About twenty-five years ago, I treated an infant for symmetrical deep second degree burns of the feet and ankles. The history indicated the burn occurred as a bathing accident. However, the grandmother later informed me that the child's mother was working at the time of the incident, and her live-in boyfriend had been taking care of the little fellow when he was burned.

The prosecuting attorney was asked to investigate this incident of apparent child abuse. I heard practically nothing about the case until I inquired about what had happened. The prosecutor's office said that the trial would be within the few next days. My deposition or a request to testify had not been sought. How-

ever, when I volunteered to appear as a witness in court, it was agreeable with the prosecution for me to do so. Apparently very little evidence about the incident had been presented to the judge.

"What's this about?" inquired the judge speaking in a manner that such a novel and probably trivial case did not merit the court's time or interest. He seemed genuinely ignorant of the perceived horror of the burning act. My testimony emphasized that the symmetrical locations and severity of the burns almost certainly were due to the infant's feet having been held submerged in scalding water. The infant was not to the walking stage of his development when he had been burned.

The trial resulted in a verdict of guilty for the defendant, and his sentence was served on probation. He maintained his status at the mother's apartment and continued to be around the infant.

In thinking about the more dramatic, violently injured men that I have treated, all that I recall returned to the home or relationship that existed before the attacks. And the fewer women treated by me have nearly always returned to their previous status.

What's a concerned surgeon or physician to do? The only agreed upon answer is to provide whatever is needed to repair wounded tissues, be supportive and open, and provide information on shelters and services. Beyond that, it seems there is not much else we can do for those involved in these tragic twists.

Societal changes are obviously needed. However, cogent arguments are made that the reduction of incidence of domestic abuse depends on many actions; and some of the proposals made are diametrical to others equally well proposed. My advice to a married woman who sometimes appears for her routine breast examinations with bruises was to seek a divorce to get away from her allegedly abusive husband. She has not done so in the three years since this was recommended. However, recently a good friend who is also a good psychologist told me that there is a significant likelihood that the abuser will stalk and kill the woman who has left him. Is planning an escape route from each room in one's home the best we can advise? What an awful outlook that must engender for the victim!

Changes in society's attitudes have come about in fairly recent times in this country. A wife or a child is no longer considered as possessions of a man. Courts

* Dr. Landrum is affiliated with Holt-Krock Clinic in Fort Smith and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

in a few states had no concerns for the interests of abused children as late as about forty years ago. There were no laws under which the child's tormentor could be tried; children were considered much the same as objects with which the family could dispose as it pleased in the home. This obviously has changed now that cases can be evaluated, and the child can be transferred to safer places if no corrective action can be assured otherwise.

Rarely would we enjoy or tolerate conversations about someone observing violence in the home or public as occurred in the account of the implement mechanic. The recent death of a woman tormented and thrown from a bridge in Detroit was reported with outrage because there were several spectators who did nothing to help. It is understandable that it is quite risky to intercede directly in those events, but no one even bothered to call for help from the police. This can probably be explained by our pervasive attitude of not getting involved. We expect someone else to respond or act.

Continual exposure to violence in the media suppresses our earlier horror at such actions, and it makes us perhaps psychologically immune to the reality of violence even when nearby. Surgeons in hospitals with six or more victims of shootings or stabbings nightly admit that it has far less impact on their personal reaction for the victims than they felt during their days in

medical school.

The availability of guns is another issue that this society must deal with soon. Recent trends indicate that firearm fatalities will exceed those from vehicle crashes in the next ten years unless something changes. In a recent issue of *Traumagram*, Dr. Kimball Maull, President of the American Trauma Society, writes about a senior surgical resident from Germany who served a trauma fellowship with him a few years back. The seasoned trainee from a busy trauma center in Germany was fascinated when he soon encountered a patient with an abdominal gunshot wound. His fascination in the case derived from the fact that he had never seen a gunshot victim before. People do not own guns in Germany. They deal with interpersonal problems with less violence and lethality. However, there are probably as many proposals before legislatures in this country to enlarge the availability of dangerous guns as there are to curtail them.

The solutions to domestic and other violence seem so complex and at times contradictory that it can lead to despair to think about the subject. However, by focusing the forces of industry, popular attitudes, legislative bodies, and most importantly, physicians willing to become activists, there is a chance domestic violence can be significantly reduced. Then, perhaps some of those involved in this horrible crime can live in peace.

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This issue of The Journal of the Arkansas Medical Society, with the assistance of the AMS Alliance, is devoted to the topic of domestic violence. For the most part, this issue is written assuming the patient is a woman. However, the same advice applies regardless of the sex of the patient. The Arkansas Medical Society and Alliance are proud and excited about this special issue of the Journal. It is our hope that our readers - the physicians of Arkansas - will gain insight on the topic of domestic violence and will use that insight in their daily practice to help a victim of abuse. Any and every contribution of help is significant. This issue is filled with valuable information from a wide variety of sources. We wish to thank all of those who have contributed.

The Arkansas Medical Society Alliance, in an effort to lessen the toll of domestic violence in Arkansas, is asking the members of the Arkansas Medical Society to:

1. Assume that at least a portion of your patients are experiencing partner or spouse abuse and act accordingly.
2. Routinely ask your female patients, either as part of medical history taking, as part of the physical exam or when an injury suggests abuse, if they are experiencing abuse from a partner or spouse.
3. If the patient indicates she is being abused, take the time to talk with her about her options. Give her the name and telephone number of the local shelter and tell her about the services it offers.
4. Document the patient's injury thoroughly. Not all abusive situations end up in court, but accurate, well-documented medical records are a big advantage if they do.
5. Don't get angry or upset with a patient if she denies what is obviously abuse or if she fails to follow-up on your advice. Nationally, 75% of battered women first identified in a medical setting will go on to suffer repeated abuse. Just remember to remain supportive and hope that the next time she will take your advice.

A Portrait of Domestic Violence

Every single minute of every day more than one woman is raped in America

AN ARKANSAS WOMAN...

was found shot in the head with a .22 caliber revolver. She was 17. The accused was charged with manslaughter instead of murder because it was the result of an argument.

was found shot in the face with a large caliber gun after an argument with her boyfriend. The boyfriend was charged with first degree murder.

was found partially clothed in a bedroom. The police chief said the scene was "one of the most brutal" he'd seen during his 18-year law enforcement career. The state medical examiner's office said she was "stabbed approximately 130 times in the breasts, vagina, buttocks, both eyes and forehead." The murder occurred two days after the couple had celebrated their first wedding anniversary. The top of the wedding cake was still on the table from the celebrating. She was 24. The husband, 27, was convicted of first degree murder and sentenced to life.

was shot in the head with a .22 caliber pistol fired by her boyfriend. He then shot himself in an apparent murder/suicide. They had lived together and were planning to get married. She was 27.

was shot several times in the chest with a .38 caliber Winchester in her home. She was 63. The accused, 64, also shot the victim's son in the stomach and shot at a police officer before surrendering. He pled guilty to first degree murder and received 20 years each for the other two charges. Authorities said it was a family dispute. The accused was drunk at the time.

was shot five times in the chest with a 9mm pistol. Her roommate found her in the hallway of their home. Her estranged husband, 41, was arrested. During the trial, several witnesses testified that he was trying to get her to come back to him, but that she had refused. He testified that he lost control and fatally shot her after she bragged of getting sexual gratification from other men and women. He was convicted of first degree murder and sentenced to life in prison. She was 50 years old.

Please read on to find out how you as a physician can help...

The Physician's Responsibility and Domestic Violence

Rosey Seguin-Calderon, M.D.*

The numbers are staggering. Annually, approximately 2 million women in the United States are reported to be victims of domestic violence.¹ Since many instances of abuse are not reported, the true incidence may be closer to 4 million women. Of these, many will suffer permanent physical as well as psychological disabilities and may even lose their lives. In fact, 52% of female murder victims in this country are killed by a current or former partner.² Studies show that battered women account for 22-35% of women seeking care in emergency departments, 14% of women in ambulatory care internal medicine clinics, and 25% of women using psychiatric services.¹

It is unfortunate that we as physicians often fail to recognize victims of abuse when signs and symptoms are present. We are in the unique situation of being able to intervene directly when patients present with injuries that are related to their abuse. Why is it that we often fail to diagnose domestic violence and what is our responsibility toward the victim?

There are patient as well as physician barriers that have been identified and may prevent the diagnosis of domestic violence. Physician lack of knowledge and training, as well as societal misconceptions regarding domestic violence have been cited as barriers.³ Some of these misconceptions can include lack of awareness of the prevalence of domestic violence, a belief that it only occurs in certain racial or socioeconomic classes, that it is a private matter and that women are responsible for the battering they experience. Patients, on the other hand, may be reluctant to expose their abusers due to fears for their safety as well as that of their families, and they are usually financially dependent on the abuser. They may feel humiliated or shamed, or even feel that they deserve the abuse they are experiencing.

It is important that physicians be able to identify victims of domestic violence as they are at high risk for physical injury and/or death, as are their families. Some possible signs of battering include vague symptoms such as insomnia, weakness, chronic pelvic pain, nervousness, depression and evasiveness. There may also be multiple somatic complaints, fear of examination and constant presence of the male partner. Routine assessment for domestic violence should be part of every routine screening of female patients, particularly in prenatal clinics, as pregnancy has been shown to be a risk factor for abuse with 15-25% of pregnant women being identified as victims.² Some examples of questions that may be asked include:¹

- 1) Have you been emotionally or physically abused by your partner or someone important to you?
- 2) Within the last year, have you been hit, slapped, kicked, or otherwise physically hurt by someone?
- 3) If pregnant, have you been hit, slapped, kicked, or otherwise physically hurt by someone?
- 4) Within the last year, has anyone forced you to have sexual activities?
- 5) Are you afraid of your partner or anyone else?

Most victims, when asked a direct question regarding abuse, will readily admit it is occurring.

The physician should remain nonjudgmental and provide support while acknowledging that abuse of any kind is unacceptable. All examinations and procedures should be thoroughly explained and well documented in the medical record. Consent should be obtained for any photographs, x-rays or body injury maps to be included in the medical record. Acute injuries need to be treated, emotional status evaluated for signs of depression, suicidal ideation, etc., and an assessment made as to any threats to the victim's immediate safety. If she is in danger, an exit plan needs to be formulated and may include:¹

- 1) Leave a packed suitcase with a friend or neighbor that includes clothes, toiletries, medications, and

* Dr. Seguin-Calderon is an Assistant Professor in the Dept. of Obstetrics & Gynecology at the University of Arkansas for Medical Sciences.

- an extra set of house and car keys.
- 2) Cash, checkbook and savings account book.
 - 3) Identification papers (driver's license, social security cards, etc.) and financial records if possible.
 - 4) A special toy for each child.
 - 5) A plan of exactly where to go; a friend or relative's home or a shelter.

The woman should be encouraged to leave the violent situation but the physician must be prepared to accept that she may remain in the current situation until emotionally ready to leave.

It is important that we as physicians be aware of what community resources are available for battered women and be able to assist patients in contacting these resources whether they be shelters, social services, legal assistance or support groups. In addition, we must become more effective in identifying female victims of past and current domestic violence through better training and education during medical school as well as residency. We should be able to educate our patients about domestic violence and be more actively involved in its prevention.

References

1. American College of Obstetricians and Gynecologists. Domestic Violence. ACOG Technical Bulletin 209. Washington, DC:ACOG 1995.
2. Arkansas Physicians' Domestic Violence Prevention Project Handbook.
3. Physicians and Domestic Violence-Council on Ethical and Judicial Affairs. JAMA 1992;267:3190-3193.

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A Survivor's Personal Experience with Domestic Violence

Anonymous

It is my hope in writing this, that it will give you a sense of better understanding of the different types of domestic violence.

I was married at a very early age. I thought all the dominance he had over me was love.

The first physical attack came shortly after we were married. But it was so easy for him to convince me that it was my fault. I felt very ashamed. I did not want anyone to know what had happened. I was not allowed to go grocery shopping. He did the shopping. He would let me visit my family only when he said it was time. I was not allowed to finish high school. I tried three times, but he made my quit each time.

I decided to have a child for several reasons. For one, I was treated as a child. I felt if I could be a mother, he might treat me as an adult. But like everything else in his eyes, I could not do that right either. My child was the most important thing in my life.

He would go into rages and throw furniture or anything he could get a hold of. I would lay on top of our daughter to protect her.

I made a mistake once of trying to run from him. He was drunk. I thought I could get away. He caught me, put a double barrel shot gun, cocked, to my temple and walked me back home. You can never know the fear that I felt those few moments. Fear plays a major role in the way a woman reacts to violence. Not only for herself, but for other family members. My father lived about half a mile from us. My ex-husband would go out with a gun and tell me if I tried to leave he would shoot my father when he came home. Several nights he would sit outside with a gun. I now know that it was a mind game he played, but at the time, I was afraid he would follow through with his threats. I did leave him several times. He would find me and

I made a mistake once of trying to run from him. He was drunk. I thought I could get away. He caught me, put a double barrel shot gun, cocked, to my temple and walked me back home. You can never know the fear that I felt those few moments. Fear plays a major role in the way a woman reacts to violence. Not only for herself, but for other family members. My father lived about half a mile from us. My ex-husband would go out with a gun and tell me if I tried to leave he would shoot my father when he came home. Several nights he would sit outside with a gun.

promise never to do anything else to me. He played on my love for my daughter. He made me feel guilty for leaving her without a father.

As my daughter grew up, the physical violence stopped. But the mental abuse got worse. There were certain things that had to be done, like washing the bathroom walls daily. If he came home and thought I had not done something, he would go into a rage and tell me how stupid and worthless I was. It really did not matter to him if I had done it or not; I could not do it right. He always told me if I ever left he would take my child. He would see that I could not make a living and he would turn everyone against me.

After my daughter married and left the state, he got worse. If he talked to me it was to curse me or to tell me what I was doing wrong. The last week I was home he scalded me twice, once with a cup of coffee and again with food he did not want for dinner. I felt like he was breaking my spirit. I knew I had to do something. He went into a rage on Thursday. He screamed and cursed me half the night. I made my mind up I was going to leave. I left for work the next morning as I always did with him standing in the window calling me his favorite name ("Bitch") and his ever familiar obscene jester. When I knew he had left for work, I went back and loaded my clothes. The only thing that gave me strength was knowing that my daughter would understand. I was never allowed to drive anywhere except to work, and I had no idea how to do what I was attempting to do. I knew of a school I wanted to go to, so that is where I headed. I knew I could not tell anyone, not even my daughter, or he would find me. I enrolled in school and took my

GED. All this was very difficult for me. I was convinced that I was too stupid to do anything. I called my daughter every two weeks. But he was doing what he said he would do. He turned her against me. To this day she hates me. Leaving my home and all I worked for was very difficult, but losing my child is the most agonizing pain I can ever endure. I got my license in a health related field. I could not find work, so I came close to home.

I knew he would find me. The terror started. He has tried several times to have my license pulled and tormented anyone who had anything to do with me. It has been five and a half years, and I still watch the back as much as I do the front when I leave work for fear that he is there. He follows me or has it done. I have two grandchildren I have never seen. I hope one day they will know I love them.

One year ago, I met a wonderful man and remarried. But it did not stop my ex-husband and daughter from continuing. I pray for them in hopes they can find peace within themselves. I know they have to be miserable with themselves. I have created a successful practice and a small business. Despite his threats, I will be able to make it on my own.

Through the Northeast Arkansas Council on Family Violence any woman can have this opportunity. I am a volunteer advocate in my county. When these ladies come to me, the first thing I do is hug them and let them cry. Sometimes these tears are fifteen to twenty years old. Then the healing process can begin. Even if you just listen while they talk about the abuse, you have done something maybe no one else could. To air your fears and full compassion can give great strength.

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A Physician's Personal Experience with Domestic Violence

Joe Stallings, M.D.*

I was impressed by the look of concern on the young man's face. His girlfriend had taken an overdose, and she was responsive but was avoiding my questions. He held her hand and answered all my inquiries. He knew all of her medications, her past medical history, and when she had her last menstrual period. What a nice guy I thought to myself! The young woman was admitted to my associate and did recover from her suicide attempt.

The next day my associate asked if I had examined the patient. My response was that of course I did. His next question was "Did you look at her buttocks?" I had to admit that I had not examined that part of her body.

He then told me that her boyfriend had branded his initials on each side of her buttocks. Needless to say, I felt that I had missed several things - physical exam findings, the reason for this young man being at the ER at 11 p.m., and a reason for the young woman's suicide attempt, all of which added up to abuse.

Domestic abuse is a problem for me as well as for my patients. How is it a problem for me? First of all, I don't recognize it as often as I should. I don't give my patients enough time to tell me about this hidden agenda, and I have difficulty believing that a "concerned" man could beat his partner. Furthermore, I am uncertain about what to do if I find out this family secret.

Why is it a problem for the patient? She may be embarrassed to tell me; she may be afraid for her life or her children's lives and she may have no choice but to return to the same environment.

The Arkansas Medical Society Alliance has been very successful during the past year in making physicians and health care providers more aware of this problem and has given me direction in how I can better serve the needs of these patients. What can I do? I can: 1.) Recognize the problem, 2.) Allow the patient to talk, 3.) Be supportive. "You deserve better than this," 4.) Be aware of and advise patients about shelters for abused women and their children, 5.) Don't feel like I own the problem. Too many times physicians feel like simple advice such as "Leave!" goes unheeded and are frustrated when the patient doesn't take our sage advice, 6.) Be available and approachable, and 7.) Work to help the abusers.

Since my experience, and after seeking guidance from available sources, I am more aware. I know domestic violence exists, and it can happen to anyone. I know some key things to look for, and I know what I can do and what I can't do. I know that if I do all I can to help, perhaps one day there will be a little less pain for those involved.

For information on how you can help victims of domestic violence, see **"Recognizing and Treating Victims of Domestic Violence"** on page 215.

Also, you may want to order a copy of the **Arkansas Physicians' Domestic Violence Prevention Project Handbook**, which provides an abundance of useful information for physicians treating victims of abuse. See page 232 for more details.

* Dr. Stallings is a family physician who has practiced in Jonesboro for 21 years. He is also the director of the AHEC Northeast Family Practice Residency Program.

From One Physician to Another:

The indiscrimination of domestic violence and what one physician is doing to help heal the scars

Jim English, M.D., F.A.C.S.*

Among the many concerns that presently beset our profession is the age old problem of domestic violence. This tragic state of affairs produces a pattern of coercion that often includes battering with injury (physical as well as psychological), sexual assault, progressive social isolation, deprivation and intimidation. This type of violence spans all racial, ethnic, religious, educational and socioeconomic lines.

Over five million women a year are affected by domestic violence in the United States and 20% of that number require medical and/or surgical treatment. Thirty one percent of the women murdered in 1990 were killed by their husbands and/or boyfriends. Twenty percent of all female trauma are victims of intentional injury by an acquaintance or husband. Seventy-five percent of women who are in an abusive relationship receive battering to the head and neck area. Many women who are in an abusive relationship are not able to leave due to monetary constraint or the psychological feeling of helplessness. What's worse is that many sustain facial disfigurement as a result of this abuse. This type of disfigurement produces a loss of self esteem and a sense of despair, especially when there is no help available for the type of reconstructive surgery necessary to return them to some sense of normalcy.

The American Academy of Facial Plastic and Reconstructive Surgery is a national organization of approximately 3,000 men and women who perform plastic and reconstructive surgery of the face. For the past four years, this organization has performed pro bono surgery outside the United States in areas such as Russia and Croatia through a program known as FACE to FACE. Two years ago, board members from the organization began to seek ways and/or opportunities to

expand the scope of this work here at home. Since many were already involved on the local level, the issue of domestic violence was explored as an avenue of community service. With the aid of the National Coalition for Domestic Violence in Denver, Colorado, a program was structured with the American Academy of Facial Plastic Surgery in Washington D.C. where participating shelters could refer battered women for a consultation and possible reconstructive surgical repair of any type of facial disfigurements that they may have sustained from domestic abuse. In the first month of inception, 400 surgeons across the country became involved in conjunction with or without the aid of their local hospital.

Earlier this spring, the English Facial Plastic Surgery Clinic asked for and received help from the Baptist Medical Center of Little Rock to begin this type of pro bono service for abused Arkansans. When a person is a victim of domestic violence, the series of events for possible participation in this program are these: a participating shelter (there are approximately 22 of them in Arkansas) can call 1-800-842-4546 twenty-four hours a day and a member of the American Academy of Facial Plastic and Reconstructive Surgery will receive and triage the call. If qualified for treatment, (they must be willing to leave their abusive situation, be financial indigent, etc.) the victim is then given the telephone number to the English Facial Plastic Surgery Clinic and referred for consultation. If surgery is indicated and the patient desires corrective surgery, the procedure (all of which is pro bono) is scheduled at Baptist Hospital in Little Rock.

Although this meets a surgical need for the victim of domestic violence, they have other needs that need to be met as well. More physicians and clinics are needed in this effort. If you are interested, please call my office at 501-227-9556. Victims of domestic abuse have been and always will be present in our profession and it is incumbent on all of us to do our share to break the cycle and help heal the scars for those willing to step forward for help.

Note: Statistical information provided by the American Academy of Facial Plastic and Reconstructive Surgery.

* Dr. English is board certified with the Am. Board of Facial Plastic & Reconstructive Surgery and Am. Board of Otolaryngology. He is a Full Fellow of the Am. Academy of Facial Plastic & Reconstructive Surgery, Am. Academy of Otolaryngology Head & Neck Surgery, Am. Academy of Cosmetic Surgery and Am. College of Surgeons. He is Southern Regional V.P. of the Am. Academy of Facial Plastic & Reconstructive Surgery, Board Examiner of the Am. Board of Facial Plastic & Reconstructive Surgery and Past President of the Arkansas Academy of Otolaryngology Head & Neck Surgery.

Recognizing and Treating Victims of Domestic Violence

*Based on the American Medical Association's Diagnostic and Treatment Guidelines on Domestic Violence
Provided by the New York State Department of Health, Office for Prevention of Domestic Violence and
the Medical Society of the State of New York.*

If you treat women, whether in private practice or a hospital setting, you are almost certainly treating some patients who are victims of domestic violence. The following decision tree is designed to help you assess a patient's risk of domestic violence and offer appropriate help to those in need of it.

Identifying Victims of Domestic Violence

Although many women who are victims of abuse will not volunteer any information, they will discuss it if asked simple, direct questions in a nonjudgmental way and in a confidential setting. The patient should be interviewed alone, without her partner present.

You may want to offer a statement such as: "Because violence is so common in many women's lives, I've begun to ask about it routinely." Then you can ask a direct question, such as: "At any time, has your partner hit, kicked, or otherwise hurt or frightened you?"

IF PATIENT ANSWERS YES, THE FOLLOWING STEPS ARE SUGGESTED:

1. Encourage her to talk about it:
"Would you like to talk about what has happened to you?"
"How do you feel about it?"
"What would you like to do about this?"
2. Listen nonjudgmentally:
This serves both to begin the healing process for the woman and to give you an idea of what kind of referrals she needs.
3. Validate:
Victims of domestic violence are frequently not believed, and the fear they report is minimized. The physician can express support through simple statements such as:
 - You are not alone.
 - You don't deserve to be treated this way.
 - You are not to blame.
 - You are not crazy.
 - What happened to you is a crime.
 - Help is available for you.
4. Document:
 - The patient's complaints and symptoms as well as the results of the observation and assessment. (Complaints should be described in the patient's own words whenever possible.)
 - The patient's complete medical and trauma history and relevant social history.
 - A detailed description of the injuries, including type, number, size, location, resolution, possible causes, and explanations given.
 - An opinion on whether the injuries were inconsistent with the patient's explanation.
 - Results of all pertinent laboratory and other diagnostic procedures.
 - Color photographs and imaging studies, if applicable.
 - If the police are called, the name of the investigating officer and any action taken (the police should be called only if patient requests this or exhibits a reportable injury).
 - Child abuse and neglect is a reportable offense. If you suspect that children in the patient's home are also being abused, you are mandated to report the situation to the Arkansas Dept. of Human Services, or any agency appointed to the function of investigating reported child abuse and neglect.

(continued on next page)

5. Assess the danger to your patient:

Assess your patient's safety before she leaves the medical setting. The most important determinants of risk are the woman's level of fear and her appraisal of her immediate and future safety. Discussing the following indicators with the patient can help you determine if she is in escalating danger:

- an increase in the frequency or severity of the assaults
- increasing or new threats of homicide or suicide by the partner
- threats to her children
- the presence or availability of a firearm

6. Provide appropriate treatment referral and support:

- Treat the patient's injuries as indicated. In prescribing medication, keep in mind that medications which hinder the patient's ability to protect herself or to flee from a violent partner may endanger her life.
- If your patient is in imminent danger, determine if she has friends or family with whom she can stay. If this is not an option, ask if she wants immediate access to a shelter for battered women. If none is available, can she be admitted to the hospital?
- If she doesn't need immediate access to a shelter, offer written information about shelters and other community resources. Remember that it may be dangerous for the woman to have these in her possession. Don't insist that she take them if she is reluctant to do so.
- Give your patient the telephone number of the local shelter or the statewide hotline number, which is 1-800-332-4443. It may be safest for your patient if you write the number on a prescription blank or an appointment card. You may wish to give her the opportunity to call from a private phone in your office.

IF THE PATIENT ANSWERS NO, OR WILL NOT DISCUSS THE TOPIC:

1. Be aware of clinical findings that may indicate abuse:

- injury to the head, neck, torso, breasts, abdomen, or genitals
- bilateral or multiple injuries
- delay between onset of injury and seeking treatment
- explanation by the patient which is inconsistent with the type of injury
- any injury during pregnancy, especially to the abdomen or breasts
- prior history of trauma
- chronic pain symptoms for which no etiology is apparent
- psychological distress, such as depression, suicidal ideation, anxiety, and/or sleep disorders
- a partner who seems overly protective or who will not leave the woman's side

2. If any of the above clinical signs are present, it is appropriate to ask more specific questions. Be sure that the patient's partner is not present. Some examples of questions that may elicit more information about the patient's situation are:

- It looks as though someone may have hurt you. Could you tell me how it happened?
- Sometimes when people come for health care with physical symptoms like yours, we find that there may be trouble at home. We are concerned that someone is hurting or abusing you. Is this happening?
- Sometimes when people feel the way you do, it's because they may have been hurt or abused at home. Is this happening to you?

3. If patient answers YES:

See suggestions listed under *IF THE PATIENT ANSWERS YES...* on the previous page.

If patient answers NO:

If the patient denies abuse, but you strongly suspect that it is taking place, you can let her know that your office can provide referrals to local programs, should she choose to pursue such options in the future.

Don't judge the success of the intervention by the patient's action. A woman is most at risk of serious injury or even homicide when she attempts to leave an abusive partner, and it may take her a long time before she can finally do so. It is frustrating for the physician when a patient stays in an abusive situation. Be reassured that if you have acknowledged and validated her situation and offered appropriate referrals, you have done what you can to help her.

Managed Care: *Global or Local?*



Arkansas Managed Care Organization Serves Local Partnerships Providing Community Care.

The world of managed care is expanding, often ignoring the benefits of local partnerships among employers, employees, doctors and hospitals. The global outlook suggests restricted health care delivered *only* by those providers who agree to lower rates in return for guaranteed patients. Arkansas Managed Care Organization (AMCO) believes there is a better way to reduce cost and ensure quality care.

Health Care's Better Way

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YOU AND THE LAW

The Domestic Abuse Act: The Physician's Role

Donn Mixon*

Domestic abuse is a pervasive societal problem recognized as such by all the states of the United States. It demands a cost to human dignity and familial order, and to community standards of justice which is disastrous. Lives and property are destroyed, victims lose all respect for the law, and the keepers of the law vacantly abide their inability or lack of desire to effect change. Arkansas, through Act 636 of 1989, joined the remainder of the states in a victim-oriented law when it passed the Arkansas Domestic Abuse Act. The act set forth specific remedies for "any family or household member" to file a petition alleging domestic abuse, to receive an order of protection without notice to the perpetrator, to be afforded a permanent hearing within two weeks with the perpetrator present, and to proceed without payment of court costs while using standardized, simplified forms. Domestic abuse, behavior recognized as unsolvable and unmanageable by law enforcement communities throughout the nation, was to be fired at from a new and comprehensive arsenal.

In the year after its passage, the Arkansas Domestic Abuse Act was declared unconstitutional. The Arkansas Supreme Court, in *Bates v. Bates*,¹ held that the legislature "impermissibly enlarged chancery court jurisdiction" because an adequate remedy at law was available to a victim of domestic violence - criminal prosecution of the perpetrator. The public outcry against the court was impressive and effective. The next session of the legislature produced Act 266 of 1991, The Domestic Abuse Act of 1991. The emergency clause to the legislation noted "that since the recent court decision in *Bates v. Bates*,¹ this state has lacked adequate remedies for dealing with domestic violence

and abuse." To help cure the prior constitutional flaw, a purpose section was included to explain the need for equity jurisdiction (family law court), ostensibly because the existing remedy at law (criminal court) was in fact not adequate.² The Arkansas Supreme Court has not had a case before it to consider the constitutionality of the 1991 Act. It appears to be more widely accepted and utilized within the legal community. However, not all authorities are convinced and one self-proclaimed "lengthy but humble" article by a respected legal authority openly criticizes the constitutionality of the new act.³

Meanwhile, the current act remains in effect and victims throughout Arkansas invoke its protection every week. The key to its use is its treatment of an otherwise criminal offense as a civil violation subject to the special powers of the equity, or chancery, court. Domestic abuse is defined as follows:

(1) Physical harm, bodily injury, assault, or the infliction of fear of imminent physical harm, bodily injury, or assault between family or household members; or

(2) Any sexual conduct between family or household members, whether minors, or adults which constitutes a crime under the laws of this state.⁴

Physicians are frequently the first professionals with the opportunity to encounter the victim of domestic abuse. One who suffers abuse as defined above often needs medical attention. It would seem that a physician who sees such a victim would simply need to instruct the victim to go to court, file a petition, get a protective order, and the victim will never suffer abuse again from that perpetrator. In practice, this scenario does not occur.

Physicians, unlike attorneys, may not be able to spend much time with the abuse victim alone. Frequently, the perpetrator will accompany the victim to the physician's office or to the emergency facility. The victim may not be truthful with the physician. A

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victim may give a false explanation for injuries or may deny the abuse even if confronted. However, the physician must not back away from looking for potential abuse, confronting a victim, giving advice, and maintaining thorough records. One state medical association has adopted the following guidelines for its members:

1. Assume that at least a portion of your patients are experiencing partner or spouse abuse and act accordingly.
2. Routinely ask your women patients, either as part of medical history taking, as part of the physical exam or when an injury suggests abuse, if they are experiencing abuse from a partner or spouse.
3. If the patient indicates she is being abused, take the time to talk with her about her options. Give her the name and telephone number of the local shelter and tell her about the services it offers.
4. Document the patient's injury thoroughly. Not all abuse situations end up in court, but accurate, well-documented medical records are a big advantage if they do.
5. Don't get angry or upset with a patient if she denies what is obviously abuse or if she fails to follow-up on your advice. Nationally, 75% of battered women first identified in a medical setting will go on to suffer repeated abuse. Just remember to remain supportive and hope that the next time she will take your advice.⁵

These guidelines can serve as excellent tools and training devices for the physician and his staff. One should be aware first of guideline number five. Victims hide their injuries and protect and return to their abuser. These are facts to be accepted and should not be allowed to drive medical personnel away from assisting the victim. Many victims are women and children who may have fewer resources than fears when it comes to leaving an abusive family member. Support is always needed from professionals irrespective of whether victims heed advice.

The first of the guidelines is a reminder to watch for domestic abuse, and the second is a suggestion to inquire affirmatively about it. It should be obvious, but it is frequently overlooked, that a victim of abuse who is afraid to reveal her status needs precise, understandable and direct questions when a history is taken. Make it a practice to try to interview a woman and her children separately whenever there is any suggestion of potential abuse. Train support personnel who interact with potential victims to be empathetic

with and interested in the victims in order to report suspicions of abuse.⁶ The abuse must be identified and the victim confronted by a concerned professional before that professional can provide any substantial assistance to the victim.

The third guideline is a critical step for the professional who wishes to help a victim but only has limited time with the victim. Attorneys and physicians are limited by the requirements of their practice in the amount of time they can spend with a single person. This time restriction is even more oppressive to physicians since attorneys frequently are seeing the victim for legal assistance to secure protection from the abuse. However, very little time needs to be taken to give the name and telephone number of a shelter, to suggest that the victim seek a protective order or other legal assistance, and to encourage the abused individual to seek counseling privately, through a shelter or a support group. The nature and availability of such services can be determined by contacting a Council on Family Violence or similar organization. It may be helpful to attend a seminar on battering given by a psychologist. It is also useful to train at least one staff person to assist in disseminating information although the victim may initially need to be offered the information by the physician. Care should also be taken in how the information is related to the victim. Since the victim usually desires secrecy and since the perpetrator may have come to the physician's office, simple and private methods of dissemination must be developed. Along with having personal contact with the victim in an examination room, place brochures with information on shelters and services in women's restrooms.

The fourth guideline may be the one with the most significance to the victim who seeks legal assistance for protection. Physicians understand and have experience in maintaining records of office visits. In the area of domestic abuse, the aspects to be remembered are that some social history needs to be included, the physician's observations need to be accurately and unambiguously stated and the records must be understandable and legible to lay persons. In some cases, these records can be used in court without the physician's testimony. Initial orders in abuse cases may be made based upon records and the testimony of the victim. In cases involving the abuse of children, medical records are frequently admitted without a physician's testimony. These records are of no benefit if they are not clear and complete. Stated another way, the physician is more likely to be subpoenaed to testify in court if his or her medical records are deficient in some manner. In many of these cases, the physician will be called to testify and receive nothing or only \$30 as compensation. Clear and complete medical

records can save the physician time and expense. The patient who is a victim of domestic abuse needs help in documenting that abuse. Physicians' records are the most readily accepted source of such documentation.

Domestic abuse is a societal problem, but its first line of attack is on a personal level. The long respected and trusted physician-patient relationship can provide an abuse victim with a sense of support, a desire to break free from the abuse, information about how to do so, and assistance to secure needed protection. Physicians are unique in their roles as early identifiers and documenters of abuse. It is hoped that this article might offer some recognition of and encouragement to strengthen this role.

Notes:

1. *Bates v. Bates*, 303 Ark. 89, 793 S.W.2d 788 (1990).

2. Ark. Code Ann. § 9-15-101 (Repl. 1993):

The purpose of this chapter is to provide an adequate mechanism whereby the State of Arkansas can protect the general health, welfare, and safety of its citizens by intervening when abuse of a member of a household by another member of a household occurs or is threatened to occur,

thus preventing further violence. The General Assembly has assessed domestic abuse in Arkansas and believes that the relief contemplated under this chapter is injunctive, and therefore, equitable in nature. The General Assembly of the State of Arkansas hereby finds that this chapter is necessary to secure important governmental interests in the protection of victims of abuse and the prevention of further abuse through the removal of offenders from the household and other injunctive relief for which there is no adequate remedy in current law. The General Assembly hereby finds that this chapter shall meet a compelling societal need and is necessary to correct the acute and pervasive problem of violence and abuse within households in this state. The equitable nature of this remedy requires the legislature to place proceedings contemplated by this chapter under the jurisdiction of the chancery courts.

3. Killenbeck, And Then They Did. . .? Abusing Equity in the name of Justice, 44 Ark. L. Rev. 235 (1991).

4. Ark. Code Ann. § 9-15-103(a)(Repl. 1993).

5. Ohio Physicians' Domestic Violence Prevention Project, Ohio State Medical Association.

6. Of course, professionals must also be alert to a suspected perpetrator. This could trigger a duty to report suspected child abuse. See Ark. Code Ann. § 12-12-507(b)(Supp. 1993).

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Familial Variables and Domestic Violence

Tracy Matlock*

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David A. Saarnio***

A version of this manuscript was presented at the annual meeting of the Mid-South Educational Research Association, November 9-11, 1994.

Abstract

We investigated variables predictive of domestic violence from 64 intake forms at a battered women's shelter. The batterer, usually the financial provider, used drugs/alcohol. Clients' physical abuse as children was correlated with whether their siblings were abused, and to emotional and sexual abuse. Clients' parents being alcoholic was correlated with spouse abuse between clients' parents and with clients' sexual abuse as a child. Findings support theories viewing domestic violence as a familial pattern.

Domestic violence is, unfortunately, a common place occurrence. Statistics compiled by the Arkansas Coalition Against Violence to Women and Children indicate that domestic violence is the major cause of injuries to women, exceeding automobile accidents, muggings, and rapes combined. National statistics (*Healthy People 2000*, 1990) reveal that "between 2 and 4 million women are physically battered each year by partners" (p. 61), with some 21 to 30% of women having been beaten by a partner at least once (*Healthy People 2000*, 1990). Moreover, domestic violence occurs at least once in up to half of all marriages. In fact, domestic violence is the most frequently experienced type of violent crime (Northeast Arkansas Council..., 1994). This violence also extends to children. For example, *Healthy People 2000* indicated that "In 1986 an estimated 1.6 million children nationwide experienced some form of abuse or neglect" (p. 61), with physical

abuse being the most common type of abuse.

From battered women seeking assistance, data have been gathered on both victims and abusers. Although battered women can come from different backgrounds, commonalities exist. Some studies have revealed that 70% of battered women go back to their batterer and that more than half of those women leave again. It is often the loss of the relationship, the family role, and security that make it very difficult for battered women to leave their spouses (Shapiro & Turner, 1986). In addition, many community resources, such as educational programs, jobs, financial help, housing, legal assistance, and childcare, are not available to help battered women (Basta, Davidson, Sullivan, & Tan, 1992). This shortage of supportive programs enhances the likelihood that battered women will return to the abusive situation.

Understanding and curbing violence between adults is necessary also to stop generational effects of violence. For example, parents who resolve marital disputes by aggressive methods tend to be more physical in the disciplining of their children (Parke & Collmer, 1975; Steinmetz, 1974) than parents who resolve their marital disputes more positively. It has long been known (e.g., Spinetta & Rigler, 1972) that parents who abuse their children are themselves likely to have been abused and neglected as children. Thus, it appears that a cycle of violence is perpetuated within families.

It is clear that domestic violence is a major problem in society. Because this violence affects the lives of both adults and children, professionals must become knowledgeable about this issue and about methods by which they can address this issue. In this study, we attempted to examine the familial factors that were related to domestic violence in a sample of battered women from the Mississippi Delta region of Arkansas. The primary research question in this study was 'what familial variables are predictive of domestic violence?'

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Table 1*Demographic Characteristics of Sample*

Demographic Variable	Percentages	
	Yes	No
Weapon Involved	36.1	63.9
Drugs Involved	61.3	38.7
Race of client: Caucasian	85.9	14.1
High school graduate/GED (client)	50.0	25.8
College/Vocational (client)	25.8	74.2
Client employed	28.6	71.4
Client has children	88.7	11.3
Client previously at a shelter	22.6	77.4
Race of abuser: Caucasian	81.3	18.8
High school graduate/GED (abuser)	66.0	22.6
College/Vocational (abuser)	9.4	88.7
Abuser employed	61.3	38.7
Past arrest of abuser or client	72.6	27.4
Abuser owns a gun	49.2	50.8
Children's awareness of abuse	92.3	7.7
Children emotionally abused	63.5	36.5
Children physically abused	38.5	61.5
Victim's parents abused one another	52.6	47.4
Was victim abused previously by a partner	48.2	51.8

Method

Data were collected from client intake forms at a shelter for battered women in Arkansas. Information was gathered from current client intake forms completed when battered women made their first contact with the agency. Of the 100 current client intake forms at this agency, only 64 forms were completed sufficiently to be used for this study. The intake form from which data were recorded included areas such as the victim's (i.e., client) and abuser's race, age, educational level, employment status, and drug/alcohol abuse, in addition to involvement of a weapon in the abuse, types of battering, types of injuries, whether the abuse was witnessed by the client's child, whether the client's child was abused, and the client's history of abuse by former partners and/or her nuclear family.

Results and Discussion

Demographic characteristics of the sample are presented in Table 1. Predictors of violence will be presented in two ways, using the percentages from demographic information and using correlations.

Who were the victims? They were, on average, 30 years of age (29.6), just 3 years younger than the batterers (32.5). The most prevalent ethnic group of reported cases of domestic violence within this Arkansas agency was Caucasian (85.9%). The majority of the sample (71.4%) was not employed, with the batterer tending to be the financial provider of the family (61.3% of cases). In addition, approximately 9 out of 10 (88.7%) had children.

Are there any contextual variables predictive of abuse? As might be expected, drugs and/or alcohol were involved in most cases (61.3%). Interestingly, half of the abusers owned a gun (49.2%), which turned out to be a predictor of the type of abuse (in correlation with $r = .27$) and type of battery ($r = .31$) that occurred. That is, ownership of a gun was related to more types of abuse (physical, sexual, and emotional), and presence of a gun was predictive of more severe forms of battery.

These variables were the same ones that were related to extent of injury. To determine the variables that would be predictive of whether or not the client

sustained injuries, a discriminant analysis was conducted. The resulting discriminant function was statistically significant, $\chi^2(9) = 19.41$, $p < .05$, and accounted for 41.0% of the variance (i.e., canonical correlation = .649). Drugs and alcohol were again integral factors, as was the type of battery that occurred. As expected, as the type of battery became more severe (i.e., pushing and/or slapping to use of a weapon), the person was more likely to sustain an injury.

Was there any previous history of abuse? Yes, 48.2% of the clients had been abused before, and 72.6% of the abusers or clients had been previously arrested. But the history goes even further. Slightly more than half (52.6%) of the victims reported that their parents had committed spousal abuse. Thus, a familial pattern appears to be present. Further, if the clients were victims of physical abuse as children, they were likely to experience emotional abuse, $r = +.35$, and sexual abuse, $r = +.31$. Moreover, abuse of the clients as children was related to abuse of their siblings ($r = +.74$). And, in line with the current sample, alcohol use by parents also was a factor. Being an alcoholic was correlated with spousal abuse by the fathers of clients ($r = +.41$) and with sexual abuse of the clients when their mothers were alcoholics ($r = +.27$). In other words, in both the present and the past, alcohol is an important component of abuse. This finding is also supported by a second discriminant analysis.

A second discriminant analysis was conducted to determine which variables would differentiate persons whose parents had engaged in spousal abuse from those persons whose parents had not. The resulting discriminant function was statistically significant, $\chi^2(2) = 12.75$, $p < .001$, and accounted for 22.5% of the variance (i.e., canonical correlation = .474). Among those people whose parents had committed spousal abuse, it was more likely that their fathers had been alcoholics and that they had been sexually abused as children than it was among persons who did not report spousal abuse among their parents.

As a final question, we examined how the abuse has affected the children of the abusers and victims? Well, it turns out that the children know about the abuse - 92.3% of clients reported that their children were aware of it. More importantly, spousal abuse seems to be tied in with child abuse - 63.5% of the clients reported that their children had been emotionally abused, and that 38.5% had been physically abused.

Implications

Our findings agree with previous research (e.g., Parke & Collmer, 1975) that drug and alcohol abuse, as well as unemployment, are involved in a substantial number of domestic violence cases. Related to unemployment may be an increase in family stress caused not only by the loss of income but, perhaps more importantly, by the increased presence of the father at home. Being home more often may simply enhance the opportunities for conflict with the spouse

and/or children. Research (e.g., Berk, 1993) supports the effectiveness of making social supports available to families in reducing familial stress.

We also found a generational pattern of abuse. Not only is spousal abuse present, there is often a previous family history of spousal and child abuse, as well as concurrent, ongoing child abuse. Thus, because abusive parents tend to imitate the parenting techniques of their own parents, abusive parents need to be provided more appropriate parenting methods, but the concurrent spousal and child abuse points to a need for teaching appropriate ways of dealing with other people more generally. In addition, because of the relation between spousal and child abuse, professionals should be especially sensitive to children who exhibit characteristics of being maltreated, such as high rates of misbehavior, difficulties with peers, and delinquency (Berk, 1993), as well as to those who have been abused previously. These characteristics may reflect a larger family problem, a problem that may begin to sustain itself. For example, research studies indicate that "once child abuse gets started, it quickly becomes part of a self-sustaining family relationship" (Berk, 1993; p. 382).

Conclusion

Our findings support theories viewing domestic violence as a familial pattern. Because of the laws requiring professionals to report suspected child abuse, professionals not only must be knowledgeable about familial variables that predict domestic violence, but, more importantly, be prepared to engage in behaviors to minimize this public health problem. We offer the suggestion that professionals become as knowledgeable as possible about community agencies which can provide assistance to families with abusive problems. Specifically, pamphlets that provide specific information should be readily available in the professional's office.

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AMS Alliance Health Project Report

Cathy S. Mackey
Health Projects Chairman

The 1995-96 Health Project is working in coordination with the AMAA SAVE theme. The Health Project for October is actually a two-part project. We have worked with the Medical Society in the production of this, the October, issue of *The Journal of the Arkansas Medical Society*, by assisting in acquiring articles, ads and other information which appears in this issue. The reason for this particular issue is that October is National Domestic Violence Awareness Month, in addition to October 11, 1995, being the kick-off date for the SAVE (Stop America's Violence Everywhere) National Campaign.

A presentation on domestic violence was given to the Jonesboro AHEC (family practice residents), and contact has been made with the six other AHEC's to present similar programs. VISTA Volunteer, Nancy Hickin, who works with NEA Council on Family Violence, attended the statewide family practice meeting in Little Rock in July and set up a booth where the domestic violence protocol handbooks, buttons and cards were distributed. We have been distributing the handbooks throughout the summer. Additional handbooks, buttons and cards are available if anyone should need them. (See page 232 for details on ordering domestic violence handbooks, buttons and cards.)

The Clothesline Project is the statewide health project we have selected for this fall. The Clothesline Project is a visual display that bears witness to vio-

lence against women. Each county alliance received the name of a woman (with a brief description) who died due to domestic violence. We asked each chapter to decorate a shirt to represent that woman's particular experience. The shirts were hung on the clothesline that was "strung" on the steps of the Capitol earlier this month. A representative from participating alliance chapters was present when their particular shirt was placed on the clothesline.

The purpose of the Clothesline Project is four-fold:

1. To bear witness to the survivors as well as the victims of the war against women.
2. To help with the healing process for people who have lost a loved one or are survivors of this violence.
3. To educate, document and raise society's awareness of the extent of the problem of violence against women.
4. To provide a nationwide network of support, encouragement and information for communities.

Regarding another project, Medical Alliance Awareness Month is March 1996. We plan to encourage the County Alliances to distribute the "I Can Be Safe" color books throughout the school systems in their county. Sample books will be sent to each chapter in January so they may make the necessary plans should they choose to participate in this project.

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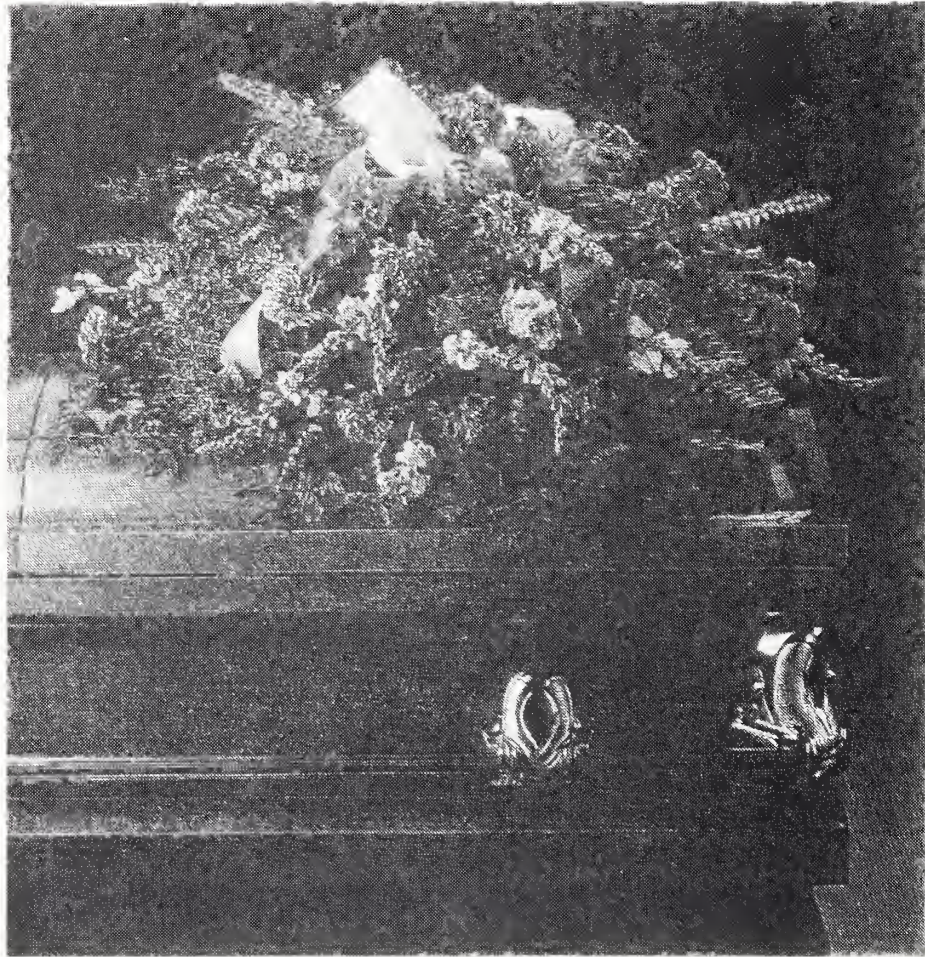


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FACTS ABOUT DOMESTIC VIOLENCE

Facts about Domestic Violence at the National Level

"Experts believe that the true incidence of partner violence is close to four million cases a year."⁴

U. S. Surgeon General C. Everett Koop found battering to be the single largest cause of injury to women in the United States between the ages of 15 and 44—over muggings, automobile accidents and rapes by a stranger combined.⁵

"15% to 25% of pregnant women are battered."⁵

Half of all married women will experience some form of violence from their partners and more than 1/3 of these women are repeatedly battered each year.⁵

1 out of every 4 women is beaten by her partner.⁶

According to the F.B.I., a woman is beaten every 12 seconds in the United States.⁷

Every 5 years, domestic violence kills as many women as the total number of Americans who died in the Vietnam War.³

30% of women murdered in this country were killed by the men they had loved.⁹

"Battering emerged as a major factor in child abuse, female suicide attempts, rape, mental illness and addiction - connections which also linked it to AIDS and homelessness."⁸

"Up to 50% of all homeless women and children in this country are fleeing domestic violence."⁵

According to the American Medical Association's Diagnostic and Treatment Guidelines on domestic violence, battered women account for:

- 22% to 35% of women seeking emergency services;
- 14% of women seen in ambulatory-care internal medicine clinics;
- 25% of all women who attempt suicide;
- 25% of all women seeking psychiatric emergency service;
- 23% of pregnant women seeking prenatal care;
- 45% to 59% of mothers of abused children;
- 58% of women over 30 years old who have been raped.

Official estimates of domestic violence rely upon reports from emergency rooms, police and the FBI; however, many women report abuse to physicians, nurses, religious officials, friends and family members and these reports are not included in national crime surveys. Therefore, statistics underestimate domestic violence cases in America.⁵

Facts about Domestic Violence in Arkansas

Each year, 6 million American women are beaten by their husbands or boyfriends; as a result, 4,000 of these women die. In 1992, 66 women and girls, of the 4,000, were killed in Arkansas.²

Men commit 85% of the murders in Arkansas, with 40% of their victims being women.¹

During 1993, Arkansas shelters and crisis lines:

- provided refuge for 4,567 battered women and children.
- took almost 20,000 domestic violence related crisis calls.
- provided legal or support advocacy to 4,541 battered women, allowing them and their children to remain home in safety.
- provided over 31,000 shelter days for battered women and children.²

Arkansas currently has 27 projects in a 75 county area that provide safe shelter, crisis lines, transportation, support groups, legal advocacy and many other services to battered women and their children.²

Arkansas domestic violence shelters receive a small amount of federal funding and no state funding. Vital donations of money, goods, and services come from their local communities.²

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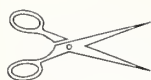


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Little Rock	Advocates for Battered Women	1-800-332-4443
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Texarkana	Domestic Violence Prevention, Inc.	1-800-876-4808
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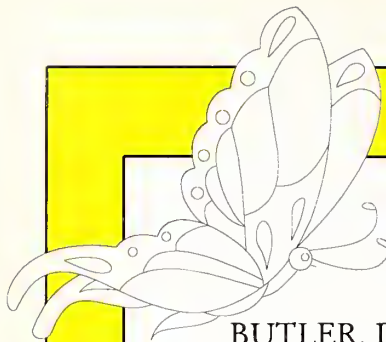
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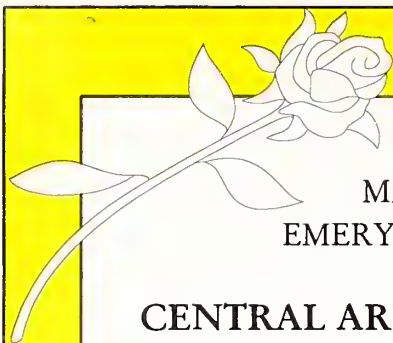
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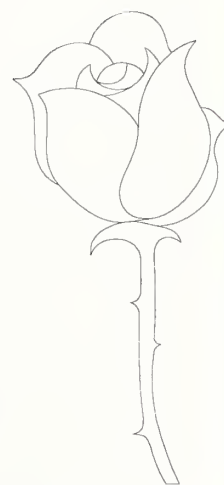
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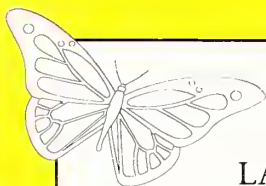
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Loss of Chance

J. Kelley Avery, M.D.*

Case Report

A 20-year-old patient with a severe industrial injury to his dominant hand came to the emergency department of a small hospital after having caught his hand in a roller device. The hand was virtually degloved from the wrist distally, but the skin remained attached to the dorsum of the hand distally from the mid-metacarpal level. There was a compound fracture of the third finger, extensive soft tissue damage to the third, fourth, and fifth fingers, and dislocation of the fourth finger at the distal interphalangeal joint.

Initial evaluation revealed some extension of the third, fourth, and fifth fingers but almost no ability to flex them. Although there was a suspected wrist drop, the record stated, "No sign of severe nerve damage." The tips of all fingers were very dark on initial examination. The surgeon on call was the physician who did most of the occupational medicine at this institution. He was not a Board certified surgeon.

In the operating room the fractures were stabilized and the flexor tendons identified and repaired. Vascular injury was suspected. The deep skin lacerations were repaired by approximating the degloved skin in such a way that the wound was covered. The ends of the fingers remained very dark. The hand was stabilized in a plaster splint with the wrist in the functional position and was elevated by suspending the hand from an I.V. pole with the elbow flexed at 90 degrees. The nurse's notes refer to a "cast" and to the fact that the hand remained cool to touch. Massive antibiotic therapy was prescribed.

On the first day after injury, about 18 hours after the surgery, the hand was "cool" and "all fingers move." There were few progress notes indicating the progress of this difficult case. On the third day after injury the fingers were "black." The following day the patient was discharged from the hospital. He was seen in the physician's office three days after discharge with the "fingers still black." Additional antibiotics were given. Eight days after discharge from the hospital, with no documented change, the patient was referred to a plastic surgeon for "possible skin grafts." This consultant believed the condition of the patient's hand was too severe for him to treat, so he transferred him to a teaching center on the same day. The entire hand was "black," and with a diagnosis of gangrene of the

hand, a disarticulation at this young man's wrist was necessary.

A lawsuit was filed charging the surgeon with negligence on three specific counts: (1) negligence in providing adequate care while the patient was in the hospital; (2) negligence in providing adequate care after discharge from the hospital; and (3) negligence in failing to refer the patient to an appropriate specialist in a timely manner. Although there was good expert testimony that the hand was not salvageable to begin with, and that the treating surgeon was not responsible for the amputation, other factors in the case and other expert testimony made a large settlement necessary.

Loss Prevention Comments

What were the "other" factors in this case? The most damaging of these was the fact that the medical record did not support the physician's close attention to this patient. Progress notes were sparse and not substantive in general. The physician's descriptions of the hand were cursory and incomplete. There was not repeated assessment of the neurovascular status of the extremity. One could detect that the hand was getting darker day by day. Following hospitalization, this patient with a very threatening injury was seen only twice in an eight-day period, after which he was referred to a plastic and reconstructive surgeon for "possible skin grafting." That quote in and of itself could be, and was, interpreted to indicate that the treating surgeon did not have a good grasp of the severity of the injury he was treating.

The point was made that this surgeon was not Board certified, and it was substantiated that he had not treated a similar injury in the past. The adequacy of the hospital and its personnel to care for an injury of this type was questioned, and indeed there was no proof that the skill level of the nurses included the observation of and care for such an injury. Probably the most damaging testimony of all was the contention that if there had been a chance to preserve this hand, it was to be found in a center where major trauma was treated and the services of a hand surgeon trained in the microtechniques of vascular and nerve repair were available. It was pointed out that such a center with the necessary staff was present less than an hour away from the site of the injury.

It is probably true that the end result would have been the same no matter where, how, or by whom this patient was treated. However, the courts place great weight on "loss of chance," which was the principal reason this case had to be settled.

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in March 1994. It is reprinted here with the author's permission.



Cardiology Commentary and Update

Tracy Dietz, M.D.*

J. David Talley, M.D.**

Charles Hiller, M.D.***

Thomas A. Golper, M.D.****

EXPANDING INDICATIONS FOR THROMBOLYTIC THERAPY

INTRODUCTION

Thrombolytic therapy with anistreplase, streptokinase, urokinase, or tissue plasminogen activator is now considered appropriate therapy to interrupt acute myocardial infarction. A prior issue of CCU highlighted the use of tissue plasminogen activator in this condition.¹ We now discuss the expanded use of thrombolytic therapy for conditions other than acute myocardial infarction.

PATIENT REPORT

A 21-year-old obese female who had no significant past medical history presented to the emergency department after the sudden onset of substernal chest tightness, shortness of air, hemoptysis, and dizziness, followed by syncope. She regained consciousness en route to the emergency department, but was severely dyspneic. She was taking birth control pills.

On examination, the patient was in moderate respiratory distress. There was a 4-cm laceration on the left forehead. She was afebrile, the pulse was regular at 110 beats/minute, respirations were regular at 32/minute, and the blood pressure was 120/90 mmHg. Breath sounds were heard in all lung fields.

An arterial blood gas on room air was 7.43, pCO₂ 36 mmHg, pO₂ 54 mmHg. The initial electrocardiogram showed sinus tachycardia at rate 110 beats/minute but was otherwise normal. Left lower lobe atelectasis was seen on the admission chest x-ray. Right ventricu-

lar systolic pressure was calculated to be > 62 mmHg by transthoracic echocardiography.

A pulmonary embolism was suspected and heparin was administered by initial bolus and then continuous infusion. A ventilation-perfusion scan revealed three large unmatched segmental perfusion defects. Lower extremity Doppler examination showed a left popliteal venous thrombus.

The patient required 100% oxygen by Venti-mask and had systemic desaturation with any physical activity. Intravenous streptokinase (250,000 IU over 30 minutes followed by 100,000 IU/hour for 24 hours) was given. Within hours after the streptokinase infusion, the oxygen saturation was 100% on only 50% oxygen concentration by Venti-mask. A repeat ventilation-perfusion scan showed near complete resolution of the defects. Warfarin was given for three months and the birth control pills discontinued. Follow-up was uneventful.

Deep Venous Thrombosis and Pulmonary Embolism

Deep venous thrombosis Deep venous thrombosis of the leg accounts for more than 500,000 hospitalizations/year in the United States and is the third most common cardiovascular disease.² While anticoagulation with heparin followed by warfarin is the standard of care, thrombolytic therapy offers the promise of providing acute symptomatic relief, preservation of venous valve function, and prevention of chronic venous insufficiency. The only Food and Drug Administration-approved thrombolytic regimen for treatment of extensive thrombi of the deep veins is a 72-hour continuous intravenous infusion of intravenous streptokinase (250,000 IU/30 minutes then 100,000

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**** Dr. Golper is Professor of Internal Medicine & Medical Director, Division of Nephrology, UAMC.

Table 1

Key Results from the European Cooperative Acute Stroke Study (ECASS)

	Intention to Treat Analysis			Target Population		
	rt-PA	Placebo	p Value	rt-PA	Placebo	p Value
Modified Rankin Scale at 90 days	3	3	0.17	2	3	0.04
Barthel Index at 90 days	85	75	0.06	90	80	0.04
Duration of hospitalization (days)	17	21	0.02	17	21	0.004
Intracranial hemorrhage by repeat CT scan	44.6%	36.6%		43.7%	36.7%	
Mortality at 30 days	18.1%	12.8%	0.07	14.6%	11.7%	0.36

Abbreviations: CT = cranial tomography, rt-PA = recombinant tissue plasminogen activator

Note: Barthel Index (0 = dead -> 100 = normal), Modified Rankin Scale (0 = no symptoms -> 6 = dead), Target Population = excluding patients with a protocol violation

Data courtesy of Jurgen Froehlich, MD.

U/hour for 72 hours). A recent review of the experience with this treatment strategy noted substantial venographic improvement in 45% of patients treated with streptokinase compared with only 5% in patients who received standard anticoagulation therapy.³ Effective treatment was observed in patients with subtotal occlusion of the venous system, and a thrombus in a proximal location. Additionally, complete resolution of venous thrombi was predictive of long term symptomatic relief. Embolic migration was noted in approximately one-third of the patients.⁴

Pulmonary Embolism Pulmonary embolism accounts for nearly 300,000 hospitalizations and 50,000 deaths/year in the United States.^{5,6} Despite substantial research interest and improved clinical awareness, there has been no improvement in survival of patients with a pulmonary embolism in the past 15 years.⁷ This disappointing change in survival patterns is related to a lack of refined diagnostic methods. The Prospective Investigation of Pulmonary Embolism Diagnosis study noted that lung scanning is surprisingly insensitive for the diagnosis of pulmonary embolism. A "high-probability" lung scan was found in less than one-half of the cases of a pulmonary embolism confirmed by pulmonary angiography.⁸

Current treatment of a pulmonary embolism relies on anticoagulation with the hypothesis that heparin and warfarin would prevent additional clots from forming while the body's own natural fibrinolytic system

dissolves the thrombus. This approach is seldom successful. In the Urokinase Pulmonary Embolism Trial, only 25% of clots were resolved by one month, and only 50% by six months.^{9,10}

There are three thrombolytic agents approved for use as treatment of a pulmonary embolism: streptokinase (250,000 IU over 30 minutes followed by 100,000 IU/hour for 24 hours), urokinase (4400 IU/kg over 10 minutes followed 4400 IU/hour for 12-24 hours), and tpa (100mg/2 hours). Thrombolytic therapy potentially relieves the mechanical obstruction to pulmonary artery flow and improves hemodynamic abnormalities and pulmonary function. Theoretically, these acute improvements prevent the development of chronic pulmonary hypertension and may dissolve the source of the embolus in the periphery, thereby preventing recurrent episodes of pulmonary embolism. Unfortunately, long-term morbidity and mortality benefit with the use of thrombolytic therapy is not evident. At seven days after treatment, there was no difference in lung scans between patients treated with anticoagulation compared with those treated with thrombolytic therapy.¹¹ A recent review of randomized trials of treatment with anticoagulation compared with thrombolytic therapy noted no difference in mortality or resolution of symptoms between the two groups.¹² However, this lack of benefit is felt to be due to the insufficient sample size to detect a mortality difference. Therefore, use of thrombolytic therapy as primary treatment for acute

severe massive pulmonary embolism causing hemodynamic instability is recommended.

Acute Ischemic Cerebral Stroke

Two randomized trials were recently completed and the results presented at the American Heart Association Stroke Meeting in Charleston, South Carolina, and at the European Stroke Conference in Barcelona, Spain.

The Europe Cooperative Acute Stroke Study (ECASS) enrolled 620 patients from 75 centers. Patients were eligible for inclusion in the study if they presented within six hours from the onset of the acute neurological symptoms and had not sustained a prior neurological event. Patients were excluded if the neurological deficit involved the vertebrobasilar circulation and if the cranial computerized tomogram scan showed a hemorrhagic lesion. Importantly, it also excluded patients with cranial computerized tomogram scan findings of a hypodense area that involved more than one-third of the distribution of the middle cerebral artery. The patients received either 1.1 mg/kg of recombinant tissue plasminogen activator (rt-PA), (not to exceed 100 mg) or a matched placebo, both given intravenously. Intravenous heparin was not used in the first 24 hours. The primary endpoint of the trial was functional capacity of the patient assessed 90 days from the time of randomization using the Modified Rankin Scale (0 = no symptoms → 6 = dead) and the Barthel Index (0 = dead → 100 = no symptoms).

Approximately 4,150 patients were screened to reach the study population of 620 randomized patients. Only 15% of the patients presented and were randomized in less than three hours from the onset of symptoms. The average age of the patients was 65 years, more than 60% were male, and the mean time to treatment was approximately four hours.

With the use of intention to treat analysis, there was no difference in the Modified Rankin Scale (rt-PA 3 vs. placebo 3, $p=0.17$) or Barthel Index (rt-PA 85, placebo 75, $p=0.06$) determined 90 days after treatment. However, when patients were excluded from analysis who had a significant protocol violation, the results were quite different. Here, with the Modified Rankin Scale, patients in the rt-PA group had improved functional capacity compared with those who received a placebo (rt-PA 2, vs. placebo 3, $p=0.04$). Similar improvement was noted with the use of the Barthel Index (rt-PA 90 vs. placebo 80, $p=0.04$). The majority (60%) of protocol violations was misinterpretation of the index cranial computerized tomogram. The protocol specified that patients should be excluded if there were major early infarct signs in the distribution of the middle cerebral artery on the initial cranial computerized tomogram. After the study was completed,

all tomograms were reviewed by experts at a central core laboratory. At this time, the designated reviewers felt that the early ischemic changes were inadvertently "missed" in 66 tomograms and these patients were enrolled who should have been excluded.

The results are summarized in Table 1. Overall, with intention to treat analysis, patients who received rt-PA were noted to have no functional improvement, a trend toward an increase in a hemorrhagic conversion and fatal outcome. When the patients with a protocol exclusion are removed from analysis, there was both short and long term functional improvement, decreased length of hospital stay, and no statistical difference in hemorrhagic conversion or mortality with the use of rt-PA.

A similar patient population was treated with streptokinase compared with a placebo. The Multicentered Acute Stroke Trial - Europe (Mast-E) included 270 patients. While a small functional improvement was noted, there was a substantial increase in morbidity and mortality with the use of streptokinase (Table 2). Two other trials in similar patients populations using streptokinase in Italy and Australia have been halted because of the unfavorable results with streptokinase.

Both trials show substantial risk of both hemorrhagic conversion and death with the use of either rt-PA or streptokinase. The delay in presentation and prolonged pre-treatment evaluation dramatically limit the applicability of this treatment strategy. Proper interpretation of the screening cranial computerized tomogram is important to exclude patients with radiologic evidence of increased risk for an adverse outcome. Additional information will be forthcoming from the National Institute of Health tpa trial of approximately 620 patients.

Preserving Catheter Patency

Vascular access devices are increasingly used as a method to avoid repeated venipuncture for intravenous access or blood sampling in patients who require long-term therapy. Thrombotic complications are reported to occur in approximately 20% of patients with these catheters.¹³ Thrombolytic therapy instilled inside the clotted catheter is reported to restore patency in more than 90%.¹⁴

Clotted & Infected Catheters used for Dialysis

Thrombolytic therapy is first-line intervention in clotted catheters and grafts used for hemodialysis. A thrombosed catheter is frequently preserved with the local infusion of a thrombolytic agent.¹⁵ Clotted grafts are treated with the cross catheter pulse spray technique.¹⁶ Thrombolytics are also used in peritoneal dialysis catheters where fibrin deposition is suspected to harbor bacteria, causing recurrent peritonitis.¹⁷

Table 2

Results from the Multicentered Acute Stroke Trial - Europe (Mast-E)

	Intention to Treat Analysis		
	SK	Placebo	p Value
Short-term mortality	48	24	0.001
Long-term mortality	61	47	0.005
Symptomatic improvement	24(17.5%)	4(3%)	<0.001
Intracranial hemorrhage	49(35.8%)	17(12.8%)	<0.001

Abbreviation:
SK = Streptokinase

Data courtesy of
Jeurgun Froehlich, MD.

Conclusions

Thrombolytic therapy is a mainstay of treatment in acute myocardial infarction. Use of these medications in deep venous thrombosis, pulmonary embolism and acute cerebral ischemic stroke remains under investigation. Local therapy for clotted catheters and grafts is frequently successful.

Acknowledgment:

The authors appreciate Sami I. Harik, MD in the review of this manuscript.

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State Health Watch

Information provided by the Arkansas Department of Health

CONTROL OF TUBERCULOSIS IN ARKANSAS NURSING HOMES

William W. Stead, M.D.*

The incidence and prevalence of tuberculosis (TB) has changed dramatically in the last 30 years. Whereas early in this century it was most common among the young with women dominating by a 3:2 ratio, it is most common today in the elderly, with men dominating in a 3:2 ratio. Most of the cases in young people in former years were due to recently acquired infection. Most of the disease in the elderly today is caused by recrudescence of infection caught and survived in their youth 40-60 years ago. TB killed Eleanor Roosevelt in 1962, nearly sixty years after she been infected.

In 1978 we encountered an outbreak of TB at one of our better local nursing homes in which 49/161 (30%) tuberculin negative residents showed a significant conversion to positive with 8 (17%) of these developing progressive primary TB even before preventive therapy could be given (*Annals of Internal Medicine*, 1981). It was traced to a man with a clinical diagnosis of terminal lung cancer who made a beautiful recovery on Rifamate. And then we learned that he, too, had been infected after he had entered the home three years earlier, suggesting that TB in that home was not a new problem.

This experience set in motion an effort to keep track of TB among nursing home residents and to require annual testing of non-reactive employees. The purpose of this paper is to report what we have learned in following five 2-year cohorts of residents of the 230 Arkansas nursing homes for 2 to 12 years.

Figure 1 shows the number of residents in each 2-year cohort, increasing gradually with time. About 5%, or 19,000 of Arkansans over age 65, are in nursing homes at any one time.

Figure 2 shows the number of residents who were known to be PPD positive before entry or whose PPD was positive on entry either to the first or the booster test applied one to three weeks later. It can be seen

FIGURE 1
COHORT ANALYSIS OF NURSING HOME RESIDENTS
ADMISSIONS PER 2 YEAR PERIOD

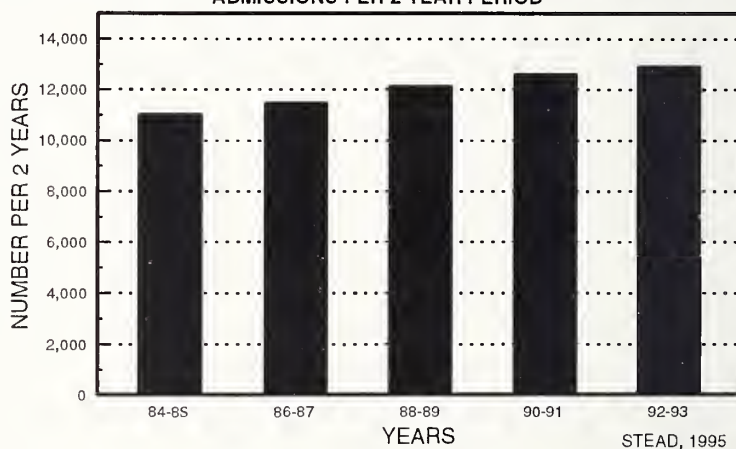
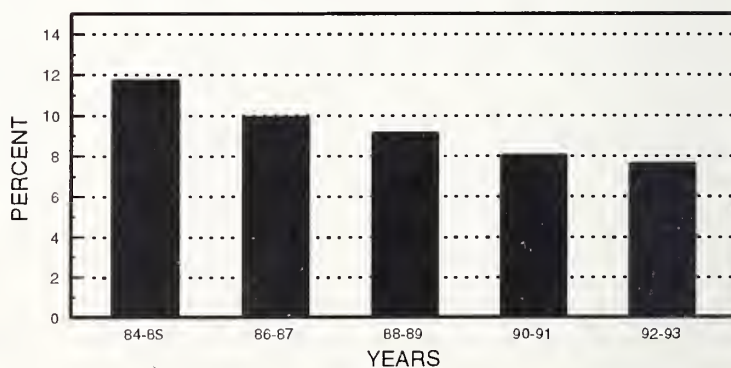


FIGURE 2
COHORT ANALYSIS OF NURSING HOME RESIDENTS
KNOWN POSITIVES, REACTORS, BOOSTERS AT ADMISSION



* Dr. Stead is Director of the Tuberculosis Program at the Arkansas Department of Health and Professor of Medicine at UAMSC.

STEAD, 1995

that the percentage of reactors has declined about 40% in the decade. I can only speculate that this drop may be due to the fact that 80 year old residents being admitted in the '90s were born 10 years later than those admitted in the '80s, because we know that the prevalence of TB infection dropped rapidly in the early decades of this century.

Figure 3 shows the percent of residents who developed active TB by recrudescence of an ancient infection after entering the nursing home with a positive PPD. It is these cases who serve as sources for transmission of TB among PPD negative residents, shown by conversion of the skin test to a definite positive (≥ 15 mm). It is interesting that the risk of TB in this group increases with age and declining immune capability (Figure 4).

Figure 5 shows the numbers of residents undergoing definite conversion of PPD reaction ≥ 15 mm. The number of conversions has decreased with time as control of the disease in nursing homes has improved.

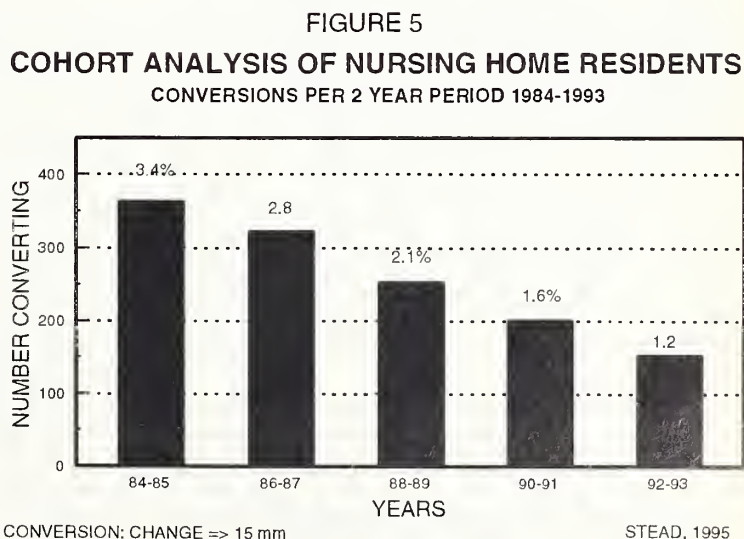
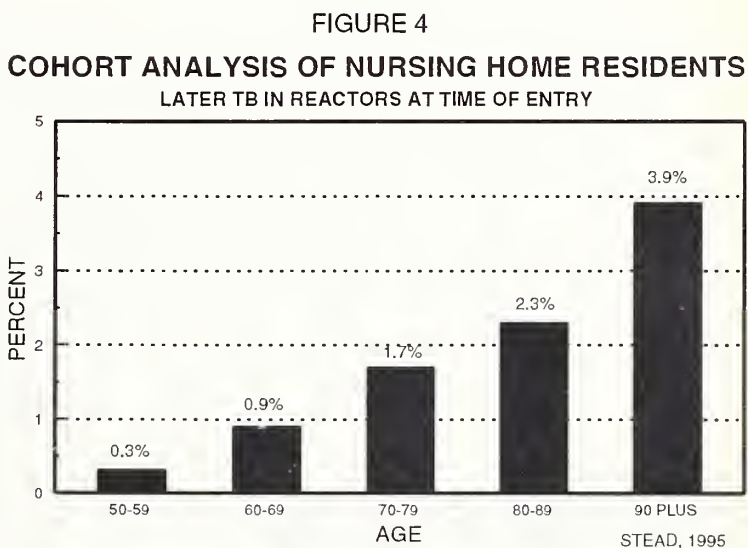
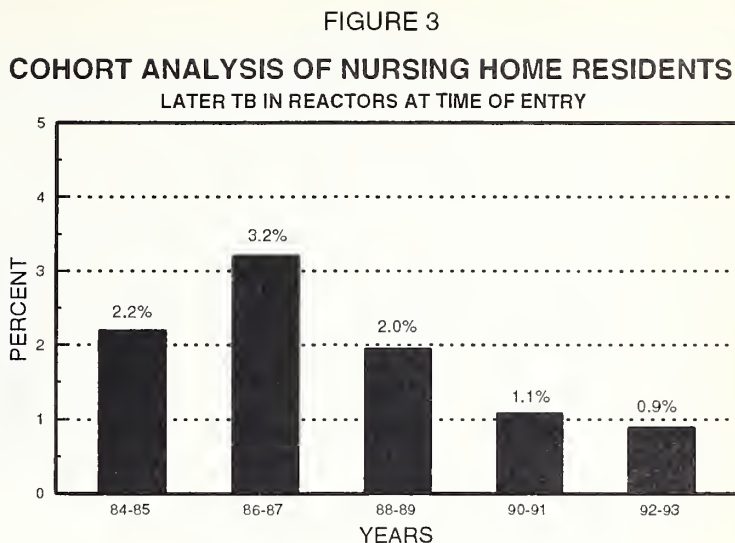
Figure 6 shows the percentage of converters who were treated with chemotherapy to prevent the development of TB. This number has declined with time as there was less transmission.

Figure 7 depicts the much greater percentage of untreated converters who developed active TB, compared with that in untreated reactors. The odds ratio is almost 6 to 1, showing clearly that the chance of a new infection producing disease is much greater than an old infection reactivating. Some of the converters become source cases for further transmission, if they are not given preventive therapy.

Figure 8 shows again that the risk of TB among PPD converters remains high in advanced age. Presumably this is due to weakening of cellular immunity in advanced old age.

Figure 9 gives the annual TB case rates (cases/100,000 residents per year) for the 10 years studied. The decline with time is gratifying and reflects the value of having good tuberculin skin test records by which to judge which persons need preventive chemotherapy after an inadvertent exposure has occurred in the home. This same principal applies to controlling TB among employees of nursing homes, hospitals, dialysis units, long-term care facilities, homeless shelters and substance abuse rehabilitation centers and correctional facilities of all types.

The risk of becoming infected varies with race, blacks being more susceptible than whites. However, the risk of a new infection producing clinical tuberculosis varies with a number of other



factors, i.e., nutrition, health of the immune system, and intensity of exposure (infecting dose). By using a cut-point of 15 mm to define a conversion, the correlation with a significant infecting dose is improved. It was shown in a recent paper that contacts of highly infectious persons were at a much greater risk of TB than the 5% in the first year and another 5% over a lifetime that is usually quoted. After heavy exposure, about 20% developed active TB even before preventive therapy could be started. If left to run its full course, such outbreaks would result in even more cases. The data for nursing homes is compared to those from a number of outbreaks following intense exposure where INH was given as soon as the problem was detected (Table 1). The difference is not significant. If not treated, PPD conversion is much more likely to produce TB than we have been led to believe.

From these observations we have learned that the control of TB in nursing homes is rather easy, if the following measures are carried out conscientiously.

1. Skin test all new residents unless there is a convincing history of a prior positive test. If the reaction at 48-72 hours is less than 10 mm, apply the test again in 1-3 weeks. This will pick up persons whose reaction had been positive but had waned with time. Post all positive PPD reactions on the front of the chart. This reduces the time lapse between development of symptoms of "bronchitis" or "pneumonia" and someone's thinking to submit sputum for AFB smear and culture.

2. Obtain an admission chest x-ray on all reactors, unless one has been normal quite recently and the patient is free of symptoms. If the film is abnormal, submit sputum for AFB. Residents who have a cough should have an x-ray and submit a sputum even if the PPD is negative. A negative PPD in the face of active TB is not uncommon in the elderly.

3. PPD reactors need not be x-rayed routinely, but they should be checked annually for signs and symptoms of TB, i.e., chronic cough, fever, night sweats requiring a change of night clothes, loss of weight or hemoptysis. If any of these are found, the patient should be examined more thoroughly.

4. Any time there is a suspicion of active TB in any resident or employee, the local health department should be notified, so that they can determine whether the problem warrants retesting all previously non-reactive residents and staff.

FIGURE 6
COHORT ANALYSIS OF NURSING HOME RESIDENTS
PREVENTIVE THERAPY OF CONVERTERS, 1984-93

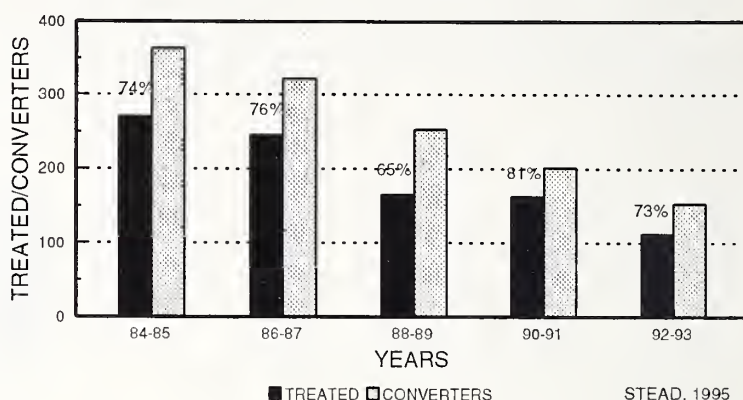


FIGURE 7
COHORT ANALYSIS OF NURSING HOME RESIDENTS
TB IN UNTREATED REACTORS VS CONVERTERS

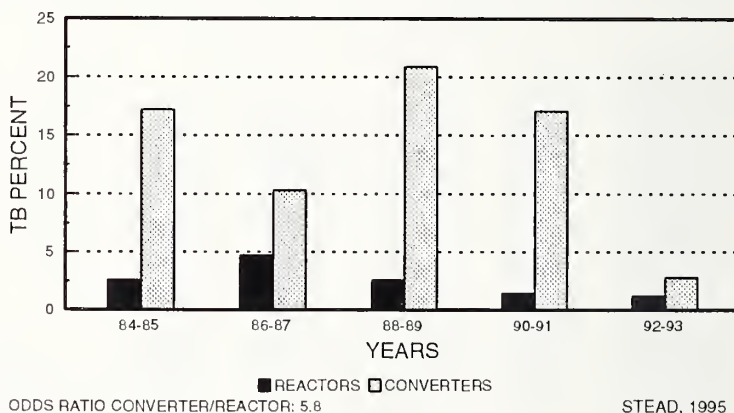
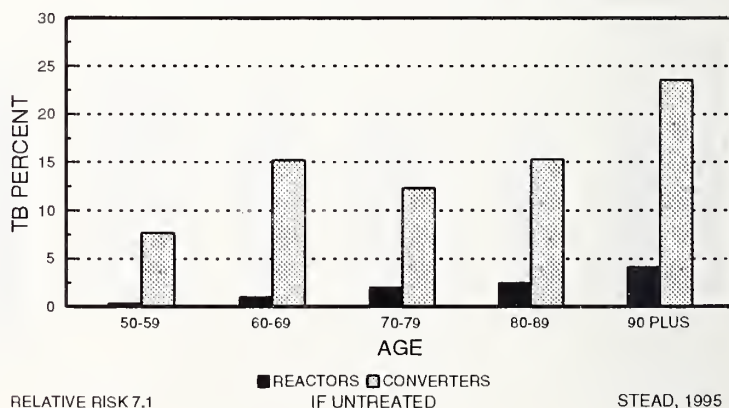


FIGURE 8
COHORT ANALYSIS OF NURSING HOME RESIDENTS
TB IN UNTREATED REACTORS VS CONVERTERS

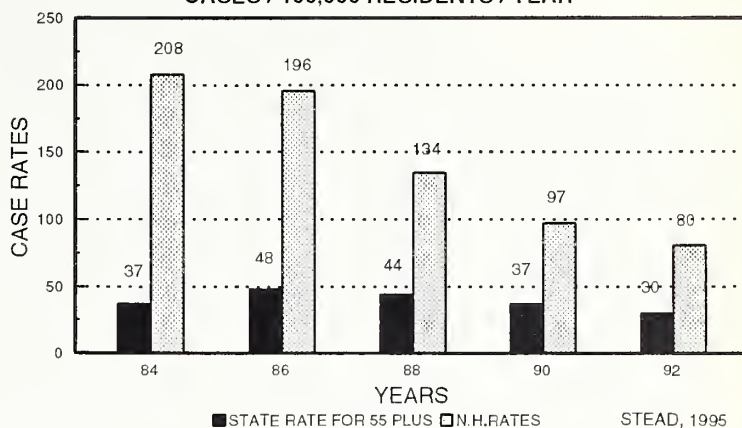


5. The local Health Department also should be notified of all converters who must be x-rayed to rule out TB. If the CXR shows no evidence of TB yet, they should be treated with isoniazid (INH) 300 mg/day and pyridoxin 50 mg for 6-9 months. All medication will be furnished by the Health Department. Sputum for AFB should be submitted on all with a cough or an abnormal CXR. If the CXR is suspicious for TB or the patient is symptomatic, two-drug therapy with rifampin & isoniazid is advisable. This is readily achieved by giving 2 capsules of Rifamate (giving the two medications together) each morning. The addition of PZA is not necessary in persons over age 60 unless there is a history of TB treatment in the past.

Preventive therapy with INH is both effective and safe if the patient does not have active hepatitis and if the patient is watched for nausea and vomiting and the medication discontinued immediately pending results of liver function studies. Those with minor elevations can usually be put back on medication after the symptoms and LFTs are both back to normal. Since 1976 we have treated about 2000 nursing home residents with INH or with Rifamate without a fatality due to the medication.

For persons with more serious reactions, it is suggested that the attending physician consult with me at the State Health Department, 661-2415.

FIGURE 9
TB CASE RATES IN NURSING HOMES, 1984-93
CASES / 100,000 RESIDENTS / YEAR



TB IN UNTREATED CONVERTERS

	TB/Convert	Percent
Recent Outbreaks*	19/98	19.4
Nursing Homes*	50/338	14.8

*Stead, Annals Of Internal Medicine, 6/15/95 Chi Square: 0.9 P Value: N.S.

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Reported Cases of Selected Reportable Diseases in Arkansas

Profile for July 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases July 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	9	85	99	82	187	130
Giardiasis	8	53	51	69	126	150
Shigellosis	8	68	107	84	193	201
Salmonellosis	22	119	165	194	534	402
Hepatitis A	91	267	66	43	253	74
Hepatitis B	4	33	32	55	60	90
HIB	0	3	2	8	6	8
Meningococcal Infections	2	24	35	21	55	27
Viral Meningitis	9	15	48	45	62	79
Lyme Disease	0	6	12	6	15	8
Rocky Mountain Spotted Fever	10	20	8	8	18	17
Tularemia	1	17	19	30	23	36
Measles	0	2	1	0	5	0
Mumps	0	3	5	6	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	511	2737	4315	3801	7078	7590
Syphilis	89	716	819	943	1324	1612
Legionellosis	0	1	9	5	16	6
Pertussis	11	26	24	11	33	17
Tuberculosis	20	126	144	104	264	209



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Arkansas HIV/AIDS Report 1983-1995

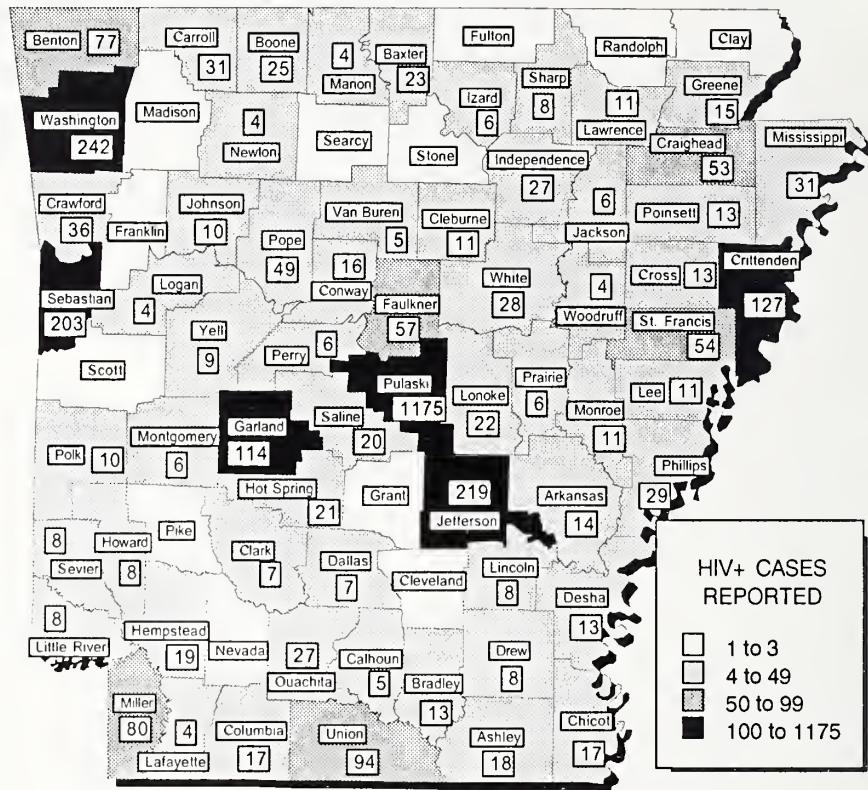
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



County of residence at the time of test for the 3,291 Arkansans reported to be HIV+. (8/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	242	2,729	83
	Female	8	26	37	68	85	81	94	90	73	562	17
AGE	<5	1	1	2	8	13	6	3	7	1	42	1
	5-12	0	1	1	5	1	2	1	0	1	12	0
	13-19	0	7	8	14	19	25	11	22	11	117	4
	20-29	33	110	123	183	149	156	175	145	93	1,167	36
	30-39	44	86	104	196	208	179	168	171	128	1,284	39
	40-49	22	25	35	56	70	67	65	77	54	471	14
	>49	8	6	11	17	22	38	23	35	27	187	6
RACE	White	87	170	174	328	298	292	278	259	193	2,079	63
	Black	21	69	108	151	184	173	163	183	112	1,164	35
	Other/Unknown	0	2	3	2	3	8	5	15	10	48	2
RISK	Male/Male Sex	64	137	140	243	246	260	241	228	104	1,663	51
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	35	506	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	14	225	7
	Heterosexual	5	25	26	59	64	68	100	87	33	467	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	3	43	1
	Undetermined	1	20	35	41	23	12	9	36	125	302	9
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	315	3,291	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995

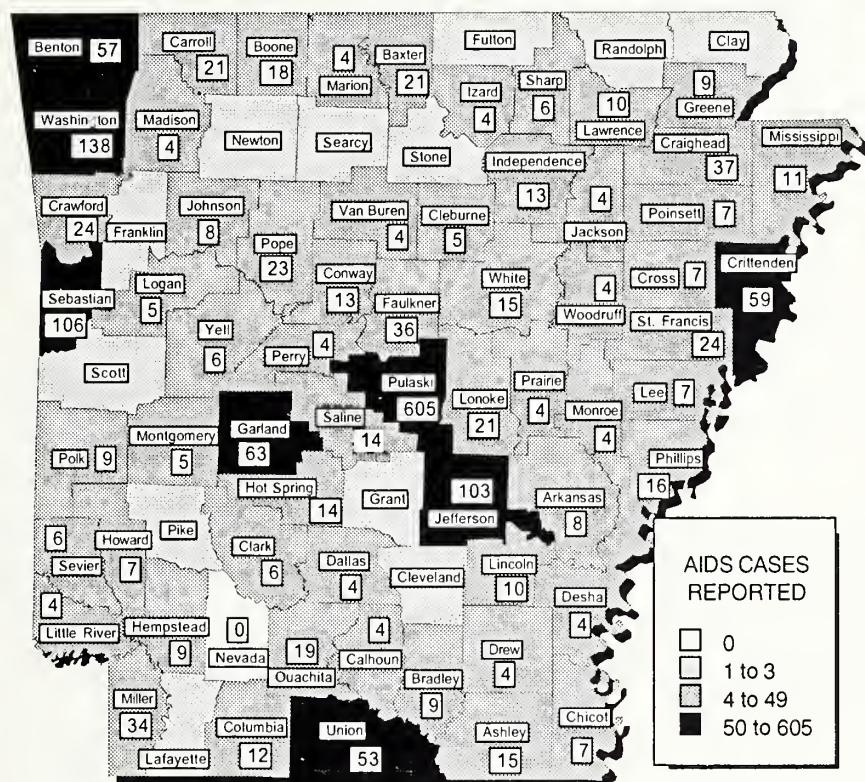
AIDS In Arkansas

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HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



Of the 3,291 Arkansans reported to be HIV+, 1,812 have been diagnosed with AIDS. (8/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	160	1,577	87
	Female	5	6	10	20	25	35	64	42	28	235	13
AGE	<5	0	1	1	6	6	3	2	1	1	21	1
	5-12	0	1	0	1	1	0	1	0	2	6	0
	13-19	0	0	0	4	3	2	4	3	1	17	1
	20-29	31	27	24	55	57	81	110	67	38	490	27
	30-39	39	36	41	78	80	128	178	133	83	796	44
	40-49	15	10	7	35	41	52	78	61	37	336	19
	>49	5	8	7	11	13	19	27	30	26	146	8
RACE	White	74	61	58	141	134	206	275	190	117	1,256	69
	Black	16	20	21	47	66	75	121	102	68	536	30
	Other/Unknown	0	2	1	2	1	4	4	3	3	20	1
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	93	1,086	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	30	265	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	11	145	8
	Heterosexual	5	3	7	11	12	24	52	41	16	171	9
	Transfusion	2	7	3	7	11	3	2	4	2	42	2
	Perinatal	0	1	1	6	6	3	3	1	2	23	1
	Hemophiliac	0	1	1	5	5	4	5	6	6	33	2
	Undetermined	0	2	1	3	1	1	2	9	28	47	3
AIDS CASES BY YEAR		90	83	80	190	201	284	400	295	188	1,812	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

CLARKSVILLE

Kuykendall, Scott Preston, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, UAMS, AHEC-Pine Bluff, 1995.

Tackett, Lee, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, AHEC-Pine Bluff, 1993/1995. Board pending.

FAYETTEVILLE

Bugbee, William D., Orthopedics. Medical Education, Univ. of Calif., San Diego, La Jolla, Calif., 1988. Internship/Residency, UCSD Med Center, 1989/1994.

Danks, Kelly Richard, Neurosurgery. Medical Education, University of Texas, Houston, 1984. Internship/Residency, University of Iowa Hospitals and Clinics, 1985/1990. Board certified.

HARRISON

Chu, Victor S., Family Practice. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995.

Maes, Stephen R., Internal Medicine. Medical Education, UAMS, 1992. Internship/Residency, UAMS, 1993/1995. Board eligible.

HOT SPRINGS

Minnich, Thomas Edward, Emergency Medicine. Medical Education, University of Tennessee, Memphis, 1982. Internship/Residency, Internal Medicine, Roanoke, Virginia, 1983/1985.

LITTLE ROCK

Bryles, Robert Samuel, Psychiatry. Medical Education, University of Arkansas School of Medicine, 1965. Internship, Duval Med Center, Jacksonville, Florida, 1966. Residency, University of Arkansas School of Medicine, 1972. Board pending.

Clogston, Charles William, Cardiology. Medical Education, University of Tennessee, Memphis, 1989. Internship/Residency, University of Tennessee, 1990/1992. Board certified.

Haas, David Charles, Psychiatry. Medical Education, Univ. of Louisville School of Medicine, Louisville, Kentucky, 1976. Internship/Residency/Fellowship, Univ. of Louisville Hospital, 1979/1980. Board certified.

Samlaska, Susan, Pain Management. Medical Education, Medical College of Wisconsin, Milwaukee, 1989. Internship, St Joseph's Hospital, Milwaukee, Wisconsin, 1990. Residency, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania, 1993. Fellowship, Cleveland Clinic, Cleveland, Ohio, 1994.

MOUNTAIN HOME

Hagaman, Michael Scott, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, John Peter Smith, Ft. Worth, Texas, 1993/1995.

RUSSELLVILLE

Hale, Jeffrey A., Radiology. Medical Education, UAMS, 1991. Residency, UAMS, 1995. Board certified.

Henderson, Vickie Lynn, Obstetrics/Gynecology. Medical Education, UAMS, 1991. Residency, University Hospital, Little Rock, 1995. Board eligible.

SEARCY

Little, James Aaron, General Surgery. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1995.

OUT OF STATE

Lindsay, Herbert Lamar, Anesthesiology. Medical Education, University of Mississippi School of Medicine, Jackson, 1990. Internship, Baptist Memorial Hospital, 1992. Residency, University of Tennessee, 1995.

Tanner, Paul Russell, Diagnostic Radiology. Medical Education, Meharry Medical College, Nashville, Tennessee, 1991. Residency, Diagnostic Radiology, Baptist Hospital, Memphis, 1995. Board certified.

RESIDENTS

Adam, Walter M., Medical Education, Kansas University Medical Center, Kansas City, 1995.

Banerjee, Pushpal R., Medical Education, Philadelphia College of Osteopathic Medicine, Penn., 1995.

Carino, Richard, Medical Education, UTHSC, San Antonio, Texas, 1995. Internship, UAMS AHEC-Pine Bluff.

Cooper, Keith Whittington, Medical Education, UAMS, 1995.

Higginbotham, Michael Shane, Medical Education, UAMS, 1995.

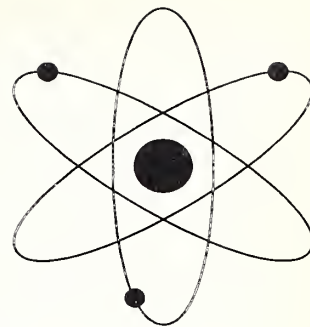
Jonak, Hermann F., Rotating. Medical Education, Texas College of Osteopathic Medicine, Fort Worth, 1992. Internship, Riverside Health Services, Wichita, Kansas, 1995.

Murunyadzi, Perkins, Pathology. Medical Education, University of Zimbabwe Medical School, 1987. Internship, Parirenyatwa & Harare Central Hospitals, Zimbabwe, 1989. Residency, UAMS.

Phillips, Tracy Thomas, Family Practice. Medical Education, Midwestern University, Downers Grove, Illinois, 1995. Residency, UAMS.

Rafio, Shahioa, Internal Medicine. Medical Education, Sindh Medical College, Pakistan. Internship, Mt. Sinai at Queens Hospital Centre, New York, 1995.

Radiological Case of the Month



Steven R. Nokes, M.D.
James Adametz, M.D.
Guy Gardner, M.D.
J. Neal Beaton, M.D.

History:

A 21-year-old female presented with neck pain. Plain films of the cervical spine (figure 1) were obtained and prompted an MR scan (figure 2).



Figure 1: Lateral plain film.

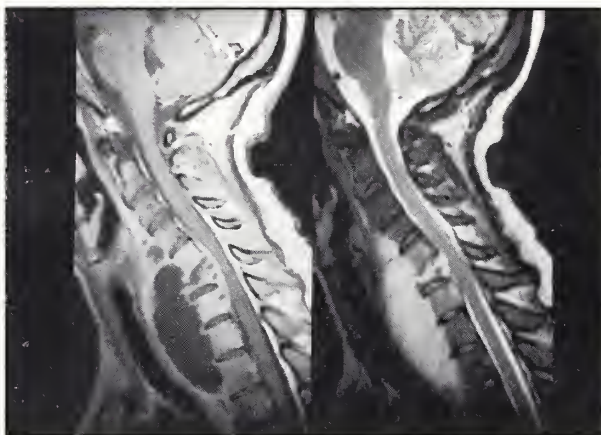


Figure 2: Sagittal T₁ post contrast and FSE T₂ weighted images.

Blastomycosis Osteomyelitis with epidural and retropharyngeal abscess

Radiographic Findings:

The lateral plain film reveals anterior destruction of the C5 and C6 vertebral bodies with kyphosis and a large retropharyngeal mass displacing the trachea anteriorly. The MR images confirm the destructive changes at C5 and C6 and also identifying marrow replacement of C4 and C7. Abnormal epidural enhancement is present with cord compression. The discs are relatively well maintained.

Discussion:

Blastomyces dermatitidis infections may be suppurative or granulomatous. Virtually any organ may be involved but the lungs, skin, and bones are the most common locations. The disease may be found throughout the U.S. but the Ohio and Mississippi Valleys have the greatest concentration of cases. Infection is acquired by inhalation of spores from the soil, similar to histoplasmosis, coccidioidomycosis and other fungal infections.

The radiographic findings are characteristic of tuberculous osteomyelitis which can be mimicked by blastomycosis. Both have a more insidious onset than pyogenic infections. Hematogenous seeding from the lungs is the rule, with the anterior and subchondral portions of the vertebral body being primarily affected. As the abscess grows, the periosteum and anterior longitudinal ligament are lifted off allowing spread up and down the prevertebral space. There is a sparing of the discs in both entities due to a lack of proteolytic enzymes. This makes metastatic disease difficult to exclude.

MR's major contributions include greater sensitivity to the multilevel vertebral body involvement which is characteristic and noninvasive definition of the epidural abscess and cord compression. Previously a CT myelogram with both a lumbar and C 1-2 puncture would have been necessary. Cervical cord edema is common with epidural sepsis, but was not present in this case.

References:

1. Friedman DP, Hills JR. Cervical epidural spinal infection: MR imaging characteristics. AJR 1994; 163:699-704.
2. Angtuaco EJC, McConnell JR, Chadduck WM, Flanigan S. MR imaging of spinal epidural sepsis. AJR 1987; 149:1249-1253.
3. Gehweiler JR, Capp MP, Chick EW. Observations on the roentgen patterns in blastomycosis of bone. AJR 1970; 108:497-510.

Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

Contributor: James Adametz, M.D. is associated with Neurological Surgery Associates in Little Rock.

Contributor: Guy Gardner, M.D. is in private practice in Little Rock.

Contributor: J. Neal Beaton, M.D. is associated with Little Rock Diagnostic Clinic in Little Rock.

AMS Newsmakers

Dr. Randall Oates, a family practitioner and computer expert in Springdale, has written and developed SOAPware, a software program which accommodates the record-keeping needs of a physician. The acronym in SOAPware refers to the first four components of a clinical encounter: subjective, objective, assessment and plan. The software is designed to streamline the patient-physician meeting, but that shouldn't mean the encounter will be less personal. Instead the program should help focus attention on the patient.



Dr. Nick Paslidis

Dr. Nick Paslidis recently received the AMA Burroughs/Wellcome Leadership Award and has been invited to attend the next two meetings of the AMA. Additionally, he has been selected by the American College of Physicians to serve in the 1995-96 National Publication Policy Committee.

Dr. Randy Russell and his wife Cherrettia of Lake Village will serve as hosts for a 12-day trip to Israel leaving Little Rock on March 16, 1996. The trip is coordinated through Discovery Ministries, Inc., of Arlington, Texas. The tour will consist of sites from Biblical days, including Bethlehem, Jerusalem, the Mount of Olives and a baptismal site on the Jordan River. The Russells have been on trips to the Holy Land for the past several years. For more information on the tour, call Dr. Russell or his wife at Lake Village Clinic, (501) 265-5343.

Dr. John Simpson of Hot Springs has been re-elected to The Nature Conservancy's Arkansas Board of Trustees. He was re-elected to a three-year term by the membership at a recent annual meeting in the Spa City.

Medicine in the News

Health Care Access Foundation

As of September 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 9,743 medically indigent persons, received 18,197 applications and enrolled 36,467 persons. This program has 1,684 volunteer health care providers including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Breast Cancer Among Women In Arkansas

Breast cancer, the most common form of cancer in women, is a significant public health threat to every woman in Arkansas. In fact:

One in eight women in Arkansas will develop breast cancer in their lifetime. This year, over 1,800 Arkansas women will be diagnosed with breast cancer and over 400 will die from this deadly disease.

Despite advances in detection and treatment, the death rate from breast cancer among black women increased about 20% during the 1980s (from an incidence of 26 per 100,000 women to 32 per 100,000).

Every woman is at risk for breast cancer, with the risk dramatically increasing with age. Although we

don't know the cause nor the best cure for breast cancer, we do know that early detection, through mammography and breast examinations, can prevent about a third of the deaths from breast cancer.

LEGISLATIVE ACTION NEEDED!

The Breast Cancer Act of 1995

This proposed legislation asks for a 2.5 cents tobacco tax levied on each package of tobacco products, a nominal tax allowing Arkansas to take the lead in combating breast cancer by promoting methods for early detection and making these detection services available to all women in our state.

The Breast Cancer Act of 1995 will establish the following: *The Breast Cancer Control Program* to be administered through the State Department of Health, and *The Cancer Research Fund* to be administered through the University of Arkansas system.

The Breast Cancer Control Program is the "heart and soul" of the Breast Cancer Act. This program, tailored after a similar program in California, will provide for the early detection, diagnosis, and in some cases treatment of breast cancer for Arkansas women. It is based on the principle that early detection is the

key to successfully fighting breast cancer. The program will be administered according to the following principles:

The program will provide funding for increased public and professional education encouraging early detection.

The program will accelerate early detection of breast cancer by providing mammography service to women who do not otherwise seek the service and to areas where the service is not available.

After screening, the program shall provide medical referrals and financial assistance for services necessary for definitive diagnosis, including non-radiological techniques and biopsy.

If a positive diagnosis is made, the program could provide economically disadvantaged women with necessary treatment.

The Breast Cancer Research Fund will support innovative research efforts here in Arkansas into the cause, cure, treatment, early detection, and prevention of breast cancer. Administered through the University of Arkansas, special emphasis will be given to fund research efforts that compliment, rather than duplicate, the research funded by the federal government and other entities.

By removing many of the barriers to early detection - misinformation, inadequate finances, and lack of access to services - the Breast Cancer Act can be a real life saver for women in Arkansas.

The Breast Cancer Act will be considered during the upcoming special session of the Arkansas General Assembly. In addition to the detection, treatment and research resulting from the passage of this Act...increased cost of the product is the single, largest deterrent to teenaged tobacco use. **Contact your state senators and representatives today and ask them to support the Breast Cancer Act!**

Free Mammograms and Pap Smears for Eligible Women

The Centers for Disease Control and Prevention has awarded \$1.4 million to the Breast and Cervical Cancer Control Program (BCCCP) of the Arkansas Department of Health to provide comprehensive breast and cervical cancer control services. The program will be implemented statewide on September 1, 1995, by county health departments, Community Health Centers (CHCs), and Area Health Education Centers (AHECs). Breast cancer mortality can be reduced by 30% if women age 50 and older received regular screening mammograms. Studies show, however, that many women miss out because they can't afford mammograms or because they are not referred for screening. The BCCCP provides funds to overcome these two barriers. The program offers free services to

eligible women which include clinical breast exams, mammograms, fine needle aspiration, Pap smears, pelvic exams, and colposcopy with or without biopsy. If the patient needs services not covered by BCCCP, she will be assisted in obtaining affordable care. The program also educates the public and health professionals about cancer screening. Physicians may refer women for screening who are age 50 or older or age 40 to 49 with a family history of breast cancer, and whose annual incomes are twice the poverty level or below. The provider should call the nearest county health department, CHC, or AHEC to determine if the patient meets income guidelines. The facility will give an appointment for the patient if she is eligible. Patients who have had abnormal screening Pap smear or mammogram results may also be referred for limited diagnostic procedures at no cost. Through the Arkansas Health Care Access Foundation, Inc., physicians can assist women in their communities by offering diagnostic and treatment services that are not covered by the Breast and Cervical Cancer Control Program. Participating volunteer physicians alternate with other physician volunteers in their geographic area to treat women with abnormal findings. Sharing the patient load assures that low-income women have the opportunity to receive appropriate cancer care in their own communities, without overburdening individual physicians. To offer services on a rotating basis, please contact: The Arkansas Health Care Access Foundation at 1-800-950-8233 or 221-3033. For more information about the Breast and Cervical Cancer Control Program or how to refer patients, please contact Dianne Crippen, RN, at 661-2636.

In Memoriam

Charles Andrew Archer, Jr., M.D.

Dr. Charles Andrew Archer, Jr., of Conway, died Saturday, August 19, 1995. He was 83. He was preceded in death by his wife, Mary Stephenson Archer. Survivors include one son, Charles Andrew Archer III, of Niles, Michigan; one daughter, Sara Jane Yoakum, of Benton; four grandchildren, Catherine Clark of Southbend, Indiana, Mary Alice Archer of Niles, Michigan, Andrew Yoakum of Conway and Elizabeth Yoakum of Benton; one sister, Mary Jane Wilkes of Little Rock.



Things To Come

November 2 - 4

American Cancer Society National Conference on Colorectal Cancer. Chicago Marriott Downtown, Chicago, Illinois. Sponsored in part by the Centers for Disease Control and Prevention. For more information, call (404) 329-5788.

November 3-5

7th Annual Infectious Disease Review Course for the Practicing Physician. Hyatt Regency Bethesda in Bethesda, Maryland. Sponsored by The Society of Radiologists in Ultrasound. For more information, call (201) 385-8080.

November 9 - 10

21st Annual Update on Obstetrics & Gynecology. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Washington University School of Medicine and the Office of Continuing Medical Education. For more information, call (800) 325-9862.

November 11

Issues in the Management of the Complicated Diabetic Patient. Chateau Sonesta Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center and the Office of Continuing Medical Education. For more information, call (800) 588-5300.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

December 15 - 18

Ethical Issues in the Care of Terminally Ill and Dying Patients. The Rolling Hills Hotel & Golf Resort, Ft. Lauderdale, FL. Sponsored by the CEREC Center of Southeast Florida. For more information, call (305) 424-9304.

January 12 - 13, 1996

What's New In General Surgery - 18th Annual Postgraduate Course. Hyatt Regency, Sacramento, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

January 26 - 28, 1996

The 15th Annual Perspectives on New Diagnostic & Therapeutic Techniques in Clinical Cardiology. Lake Buena Vista, Florida. Sponsored by the American College of Cardiology. For more information, call 800-257-4739.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

February 10-13, 1996

Fifty-first Annual Postgraduate OB/GYN Assembly. Beverly Hilton Hotel, Beverly Hills, California. Sponsored by the OB/GYN Assembly of Southern California. For more information, call (213) 937-5514.

February 17-19, 1996

Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Office of Continuing Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 19 - 23, 1996

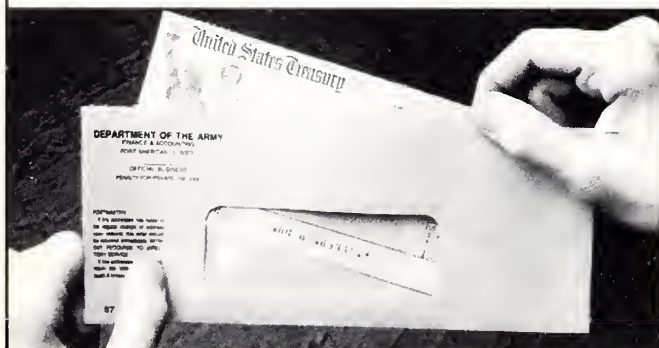
"New Technological Applications in Imaging & Intervention." Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Louisiana State University School of Medicine and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

April 26 - May 3, 1996

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

PHYSICIAN RESIDENT ALERT: IF YOU COULD USE OVER \$25,000 A YEAR— ANSWER THIS AD.

The U.S. Army's Financial Assistance Program (FAP) is offering a subsidy of over \$25,000 a year for training in certain medical specialties.



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October 26 & 27, 1995

University of Arkansas for Medical Sciences

Department of OB/GYN

**Arkansas High Risk Pregnancy Program's
Twelfth Annual Conference on Perinatal Care**

Excelsior Hotel

Special Guests & Informative Topics including Early

Discharge/Home Care • PROM • Diabetes

For more information, call (501) 661-7962

October 27 - 28

**Re-engineering Healthcare in Arkansas - A
Roadmap to the 21st Century**

Sponsored by Baptist Medical Center

Location: Statehouse Conference Center

Update in Primary Care Geriatrics

Washington Regional Medical Center

CME Activity Dates:

Saturday, Nov. 11 - 8 a.m. - 10:30 a.m.

*These dates coincide with the Fayetteville
Razorback football games. Tickets for the games can
be obtained by calling 1-800-982-HOGS (4647).*

For more information about the conference,
call (501) 442-1823.

October 28 - 29

**Computed Topography of the Body Annual
Fall Meeting of the Arkansas Chapter of the
American College of Radiology**

Sponsored by UAMS College of Medicine,
Department of Radiology

Location: UAMS Education III Building

For more information, call (501) 661-7962

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

GI Conference, 4th Friday, 11:30 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category 1 of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

EKG Conference, Mondays, noon, VAMC, room 5C114

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

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Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:30 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, AHEC - South Arkansas. Lunch provided.
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Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:30 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:30 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:30 p.m., AHEC - South Arkansas

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AHEC Teaching Conferences, Fridays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Thursdays, 7:30 a.m., Washington Regional Medical Center
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

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Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conference, October 26 and December 28, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
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Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

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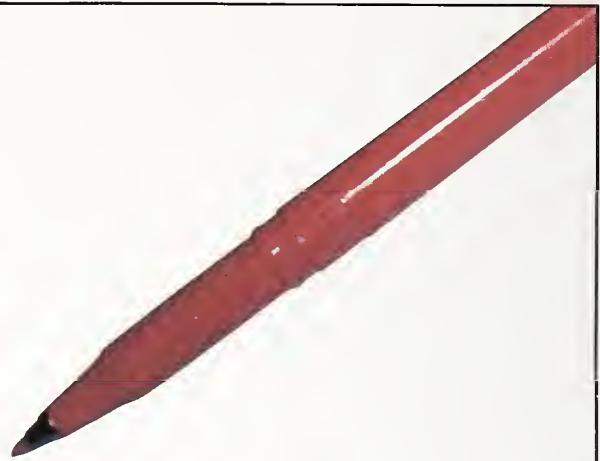
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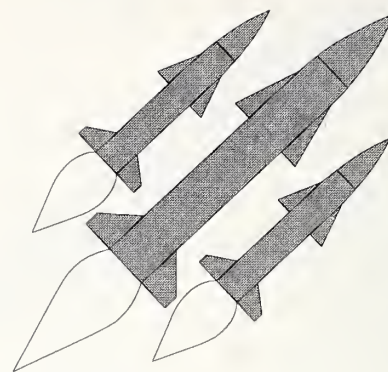
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Everybody's Doing It:

A P.E.T. peeve or a public service?

Lee Abel, M.D.*

The cold war is over, and capitalism seems to reign triumphant in the world economic order. Government controlled socialistic systems seem to be collapsing (they pretend to pay us, and we pretend to work), or rapidly evolving toward capitalism. Our system won, but it does not embody pure capitalism. Some government regulation of the economy has evolved to control the excesses of unfettered capitalism. We are still struggling with how health care should fit into our market economy. Advertising, for instance, is a central tool of the market driven economy and seems appropriate when selling soap powder, but what role should advertising have in "selling" health care?

Socialistic systems have used advertising, but their "propaganda" was often crude, heavy handed, and quite far removed from the modern advertising techniques developed by Madison Avenue. In the last few

claim to be the best place to keep you well). No doubt there are tremendous pressures on hospitals to advertise in order to hold onto or gain market share. All of the medical centers play this game; the for-profit, the non-profit and UAMS. As this battle is conducted for the hearts and minds (figuratively and literally) of the public, it seems reminiscent of the cold war nuclear buildup. Each medical center strives to gain what might be called "first strike capability," and declare victory in the medical arms race.

Many of these advertising campaigns raise questions about their accuracy and purpose. A large medical center's recent ad appearing in the *Arkansas Democrat-Gazette*, "Our New PET Project," is a case in point. The ad encourages people to "just ask your doctor for more information about the PET Scanner" at that particular hospital. Should John Doe on his next visit to me

As this battle is conducted for the hearts and minds (figuratively and literally) of the public, it seems reminiscent of the cold war nuclear buildup. Each medical center strives to gain what might be called "first strike capability," and declare victory in the medical arms race.

years, these techniques have been used to produce lavish and slick advertising campaigns by all of the local medical centers. Each tries to out do the others and claims the role of the best, the most advanced, the most caring place to be sick (or more recently, they

for a blood pressure check really ask me about the PET test as the ad exhorts him

to? Maybe I should reply, "Well, you know John, as the hospital's ad tells us, 'When disease strikes, the more you see - and the earlier you can see it - the better chance you have of quickly and successfully diagnosing and treating the problem. It's like looking for a needle in a haystack when the challenge is to find the needle as quickly as possible.'" John readily agrees and asks that I promptly schedule a total body PET scan. He leaves my office a

* Dr. Abel specializes in internal medicine and is affiliated with the Little Rock Diagnostic Clinic. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

satisfied consumer, secure in the knowledge that the PET scan will soon tell if there are any hidden needles in his haystack!

The advertisement claims that the machine "means better health for Arkansas." Perhaps some patients will benefit from this machine, but who is really trying to benefit from this advertisement? The hospital may claim that the ad is merely a service informing the public about an important new technology, but does the ad give the public a fair assessment of this new technology? Do patients benefit by asking their doctor for or about a specific test, or are they generally better served by the traditional approach of describing their symptoms and concerns to their doctor? Was this hospital's judgment about spending scarce dollars for this machine swayed by the public relations value of having this, as the ad brags, "exclusive" technology? The hospital is now in the HM0 business, and one wonders if the literature for its HM0 patients urges asking the gatekeeper physician about high tech and high cost tests. What is going on of course, is not about educating the public; it is about trying to gain a marketing advantage over rivals. Will we see a retaliatory ad attack (coming in low over the horizon) by another medical center which will further escalate the contest?

All of the medical centers do an enormous amount of good for individuals and for the community. The dedication of many of the hospital employees awes

me. We are blessed to have such excellent institutions. But I wonder if their incessant one-upmanship doesn't diminish rather than enhance their image and integrity. Imagine, if you will, our media less filled with their self-promotion, partial truths, exaggerations, and pretensions. Imagine the advertising budget being spent instead on patient care. Far from being an altruistic public service, these ads often cause confusion, generate anxiety, and may diminish people's confidence in their own health. Thus, their effect may be to actually worsen health.

None of us can be self-righteous, as we all have to earn a living, and we all do things that benefit ourselves as well as benefit our patients. It's also human nature, and the nature of institutions, to want to appear more noble, generous and wise than we really are, and advertising reflects this desire. The hospitals could fairly point out that they are not the only ones advertising extensively. Some physicians are also now using advertisements to solicit patients. Yet even though "everybody's doing it," maybe we need to try to lower the rhetoric of our propaganda and have a little more candor about what is being done and for whose benefit. Such "advertising disarmament" (like in the nuclear arms race) is risky if done unilaterally. However, if embraced by all of the hospitals and physicians, perhaps it might lead to a healthier and more peaceful community.

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LOSS PREVENTION RESPONSE

I wanted to respond to the article by J. Kelley Avery, M.D., "Frozen Section Error? Rare, but Disastrous." There are a number of comments I have on this article (which appeared in the September 1995 issue of *The Journal*).

It illustrates a number of problems that could have been avoided in this case. On the initial biopsy it must be assumed that this was done under a needle localization, although this is not definitely stated. If not, this certainly should have been done. This was a mammographic abnormality of calcifications and not a palpable lesion. In addition, there is no mention as to whether a specimen mammogram of the removed specimen was performed to confirm removal of the lesion. If not, this should have been done as well, which would have confirmed the removal of the suspicious area at that time and prior to pathologic evaluation.

The second procedure was done with a planned biopsy and mastectomy as a single procedure. There are a number of problems inherent in this technique, including the one mentioned here, in which the initial frozen section diagnosis did not confirm the final pathological diagnosis. Although I agree this is an extremely rare event, it can happen.

Requiring a woman to decide on treatment options for a potential cancer prior to knowing her definitive diagnosis, would not, in most cases, be desirable. It's difficult to give informed consent as to the type of surgical procedure she would undergo. Therefore, a two-stage procedure with an excisional biopsy of a suspicious lesion, discussion of the final pathology when it is available, and then recommendations for definitive treatment made on that basis would have prevented the problems shown here.

Michael Bouton, M.D.
Fort Smith

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Acute Pancreatitis as the First Manifestation of Hyperparathyroidism in an Otherwise Asymptomatic Patient

L.A. Nikolaidis, M.D.*

M.N. Leon, M.D.**

N.J. Paslidis, M.D., Ph.D.***

ABSTRACT

Acute pancreatitis as a manifestation of hyperparathyroidism (HPT) has been reported in the literature but the concept of causal relationship has been disputed. We report a case of acute pancreatitis where the presence of hypercalcemia led to the diagnosis of primary HPT. No other current risk factors for pancreatitis were identified and no symptoms of HPT were present prior to this episode. We review the literature regarding the role of HPT in the pathogenesis of acute pancreatitis.

INTRODUCTION

Hypercalcemia due to primary hyperparathyroidism (HPT) has been cited as a causative factor in the pathogenesis of acute pancreatitis in the textbooks of Internal Medicine, based upon previous reports in the literature^{1-3, 11} which demonstrated pancreatitis as a relative frequent complication of primary HPT in the absence of any other plausible etiology. In the majority of reported cases, the symptoms of pancreatitis preceded other manifestations of HPT, leading the authors to the conclusion that pancreatitis is an important diagnostic clue to the early diagnosis of HPT. However, a recent study¹⁰ has disputed the concept of a causal relationship between the two diseases, emphasizing the fact that even coexistence of the conditions is lower than previously reported. We report a case of acute pancreatitis as the first manifestation

of primary HPT and review the literature related to this uncertain issue.

CASE REPORT

A 28-year-old white male presented with a 48-hour history of dull epigastric and periumbilical pain, with nausea and vomiting of bilious fluid twice prior to admission. The patient denied any other symptoms, including hematemesis, melena, diarrhea, jaundice, or urinary symptoms. Past medical history, family history and review of systems were negative. The patient was a heavy smoker (1 1/2 packs per day) and reported occasional use of marijuana. He also reported excessive alcohol intake (4-5 drinks per day) for 5-6 years, although he claimed to have been sober for approximately six months prior to admission. He was on no medications and denied allergies.

The patient was afebrile initially, with T98 °F. Heart rate was 100/min. and BP 160/100 mmHg. Clinical examination revealed epigastric and left upper quadrant tenderness on deep palpation with trace heme positive stool. Examination otherwise was unremarkable.

Initial Laboratory Data revealed BUN 5.71 mmol/L (16 mg/dL), Creatinine 88.4 mol/L (1.0 mg/dL), Na 138 mmol/L, K 4.3 mmol/L, C1 100 mmol/L, C02 21 mmol/L, Glucose 6.65 mmol/L (121 mg/dL), Magnesium 0.66 mmol/L (1.6mg/gL), Hemoglobin 2.83 mmol/L (18.3 g/dL), hematocrit 54.7%, MCV 94.5 fL, white blood count 14.8x10⁹/L (S 81%, B 14%, L 2%, M 3%) LFT's: SGOT 31 IU/L, SGPT 56 IU/L, Alk Phos 95 IU/L, LDH 164 IU/L, GGTP 260 IU/L, Total Bilirubin 20.5 mol/L (1.2 mg/dL), Direct Bilirubin 11.9 mol/L (.7mg/dL). Amylase 588 IU/L, lipase 380 IU/L. ABG on room air: pH 7.43, pC02 35, pO2 87. Urinalysis was negative. ECG showed sinus tachycardia and chest x-ray was normal. Abdominal x-ray demonstrated evidence of small bowel ileus with a sentinel loop. No calcifications were seen in the

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** Dr. Leon is with the University of Texas Medical School, Dept. of Medicine in Houston.

*** Dr. Paslidis is affiliated with the White River Rural Health Center in Arkansas and is a fellow in gastroenterology at Harvard Medical School.

area of the pancreas. There were bilateral erosions of the femoral heads with a provisional radiologic diagnosis of aseptic necrosis of the femoral heads.

The patient was admitted to the medical service with the presumptive diagnosis of acute pancreatitis, possibly related to alcohol abuse. He had nothing by mouth, was hydrated with intravenous fluids for dehydration evidenced by tachycardia and hemoconcentration, and was treated conventionally with meperidine for pain and promethazine for nausea. He was given intravenous famotidine for possible alcohol-related gastritis. He refused placement of a nasogastric tube. On the second hospital day the patient developed a fever of 101.3°F, even though his abdominal pain had resolved. Two blood cultures were negative. His hematocrit dropped to 46% and he continued to have trace heme positive stool. Abdominal ultrasound demonstrated a minimal amount of ascites and paralytic ileus, consistent with pancreatitis. No calcification, gallstone, inflammation of the pancreas, or hepatobiliary obstruction was seen. He was given a clear liquid diet which he tolerated well. Additional laboratory studies revealed normal B12 and folate levels, a normal lipid profile, elevated calcium at 3.22 mmol/L (12.9 mg/dL), ionized calcium 1.54 mmol/L (6.16 mg/dl), phosphorus 0.32 mmol/L (1.0 mg/dL, nl = 2.3-4.7mg/dL). His fever persisted but his clinical condition was otherwise stable. By the third day, amylase and lipase started to fall (139, 69 respectively). His diet was advanced to low fat, low lactose with pancreatic enzymes supplementation. On the fourth day, it was noted that the patient ate well. Amylase and lipase improved further. He remained febrile to 101°F and an abdominal CAT scan demonstrated a diffuse pancreatic phlegmon involving the distal body and the tail of the pancreas. Hepatobiliary tract was intact. Repeat calcium, phosphorus and magnesium levels confirmed the initial values. Magnesium and phosphorus were supplemented.

The patient left the hospital (against medical advice). He was discharged on oral antibiotics (ciprofloxacin and amoxicillin), famotidine, pancreatic enzymes and magnesium and phosphorus supplements. A week later he was free of symptoms and afebrile. He claimed compliance with his diet and abstinence from alcohol and drugs. Subsequent laboratory values showed normal T4 74.1 mmol/L (5.7 g/dL nl 4-12 g/dL) and TSH 1.92 mU/L (nl 0.46-5 mU/L), and urine calcium 9.35 mmol per day (374 mg/day, nl 2.5-7.5 mmol/per day or 100-300 mg/day) ruling out hypocalciuric hypercalcemia. Parathyroid hormone level was primarily measured by IRMA assay (iPTH) at the level of 84 ng/L and retested to reveal a level of 130 ng/L. (nl 10-65 ng/L), and Urine cAMP .58 mol/L (nl .18-.43 mol/L), confirming the diagnosis of hyperparathyroidism. Ultrasound of the neck revealed

a nodule at the left lower lobe of his thyroid gland. The patient refused surgical exploration of the parathyroid glands and he experienced another episode of acute pancreatitis three months later.

DISCUSSION

The potential role of parathyroid hormone in the pathogenesis of acute pancreatic necrosis had been described in the 1940's.¹ Acute pancreatitis may be the presenting manifestation leading to the diagnosis of hyperparathyroidism.² Five years later, investigators from the same center³ presented further data from 62 cases supporting this relationship and hyperparathyroidism started to appear among the causes of acute pancreatitis in the standard textbooks of pathophysiology.⁴ It was known⁵ that calcium enhanced the activation of trypsinogen to trypsin and inhibited autodegradation of trypsinogen, resulting in an explanation for the pathogenesis of pancreatic autodigestion which occurs in acute pancreatitis. Hypercalcemia was found to be the common factor, linking the two medical conditions, fully consistent with reports^{6,7} of acute pancreatitis associated with hypercalcemia resulting from other causes, e.g. malignancy. An additional case⁸ of acute pancreatitis as a first manifestation of hyperparathyroidism was described in an adolescent in 1973. Other presentations of pancreatic insufficiency, such as steatorrhea, were associated with hyperparathyroidism in the absence of pancreatitis,⁹ and quantitative tests of exocrine pancreatic function were found to be abnormal in these individuals.

In many of these studies, the diagnosis of hyperparathyroidism was confirmed histopathologically and surgical removal of the affected glands frequently resulted in improvement of either symptoms of acute pancreatitis or manifestations of malabsorption syndrome but not of objective abnormalities of exocrine pancreatic function tests.

It seemed that the role of hyperparathyroidism in the pathogenesis of acute pancreatitis (via hypercalcemia) had been well established until a collective retrospective study from the Mayo Clinic¹⁰ appeared in 1980, casting doubt over the hypothesis. Review of over 1000 charts led to the conclusion that the incidence of acute pancreatitis in hyperparathyroid patients was not significantly different from that in the general population. They attributed the previous findings to coincidence and biased selection criteria.

Over the past six years, there have been only 13 publications related to this issue, only 3 of them^{1, 11, 12} in the English literature. The most comprehensive report, however, originated from Spain¹¹ and supported the original idea of causal association between the two medical conditions, with hypercalcemia being the common feature. They reported 7 cases of pancreatitis among

86 cases with primary hyperparathyroidism and 3 cases of pancreatitis related to secondary hyperparathyroidism after renal transplantation. Interestingly, the authors included patients with concomitant well-known risk factors for pancreatitis, such as alcohol, gallstones or immunosuppressive therapy, emphasizing the need to exclude hyperparathyroidism even in the presence of other risk factors. They reported good outcome following parathyroidectomy in 80% of their patients, although there were two episodes of pancreatitis postoperatively.

In our case, the history of alcohol abuse and the absence of other symptoms of hypercalcemia threatened to lead us to a premature diagnosis of alcoholic pancreatitis. The atypical bone changes in the abdominal x-ray and the patient's denial of recent alcohol use focused additional attention on the elevated serum calcium.

We conclude that measurements of calcium (preferably ionized), magnesium and phosphorus are mandatory in any patient hospitalized with pancreatitis, even though there is still some controversy in the literature about the relationship between hyperparathyroidism and pancreatitis.¹⁰ The diagnostic approach, when hypercalcemia is established, should include thyroid function tests,¹³ malignancy work-up where appropriate and a 24-hour urine collection to rule out hypocalciuric hypercalcemia. If all these are normal, a parathyroid hormone IRMA assay is a sensitive test to detect hyperparathyroidism and should be repeated if the first result is borderline. All these, of course, should not interfere with the appropriate conventional treatment for acute pancreatitis. It is also noteworthy that the serum calcium level, in some cases of pancreatitis, could be depressed to deceptively normal values despite hyperparathyroidism, since pancreatitis has been complicated with hypocalcemia via a mechanism which is not entirely understood. Therefore, a serum calcium level in the normal range in a patient with acute pancreatitis does not exclude the diagnosis of hyperparathyroidism and the serum calcium level should be repeated when the acute pancreatic inflammation has subsided. General application of such an approach may result in the acquisition of additional data which could help define whether hyperparathyroidism does indeed play a role in the pathogenesis of acute pancreatitis.

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Progress Report: Arkansas Foundation for Medical Care As a Quality Foundation

William E. Golden, M.D.*

Mario Cleves, Ph.D.**

Donna Didier, M.Ed., R.R.A.***

Russell Brasher, Ph.D.****

The Health Care Quality Improvement Program (HCQIP) brought together a new Arkansas Foundation for Medical Care (AFMC) team composed of established professional staff as well as personnel recruited specifically to implement the new contract. It is worthwhile to reflect upon this new venture at the halfway point of the contract cycle. This communication outlines growth and evolution of the Health Care Quality Improvement Program in Arkansas. In particular, it will address accumulated wisdom and future directions.

Early planning sessions focused on the need to create a philosophic approach to HCQIP that would result in focused projects, relevant to local institutional constituency. We faced many unknowns including uncertainty as to the usefulness of a claims database in designing educational projects. Furthermore, we had to create a mechanism by which we would facilitate institutional acceptance of PRO communications following an era of moderate hostility stemming from the punitive nature of previous contracts.

Early on, the HCQIP team realized that resources and time precluded the creation of local practice guidelines. Rather, from the first we designed relevant audit criteria based on authoritative practice guidelines or the consistent findings of multiple clinical trials. We concomitantly created a HCQIP hospital response form that served three purposes: 1) feedback to AFMC as to the quality of the project, 2) feedback as to the impact on quality improvement activity of statewide facilities, and 3) feedback of suggestions to improve the program.

For our first project, we chose a very limited subject,

the recognition of angioneurotic edema as a complication of angiotensin converting enzyme inhibitor therapy. This project allowed us to inspect records of all Medicare patients with this disorder that required hospitalization. Chart audit verified prevalence in failed recognition of this condition. The project was a successful initial venture because it demonstrated 1) that AFMC could manipulate the database to identify cases in an efficient and effective manner, 2) that we could design effective audit tools, and 3) that clinically interesting and relevant information, when given to statewide hospitals, was well received.

Because this disorder is relatively rare, we did not focus on an individual hospital but rather assessed statewide performance. This approach resulted in enough cases to make valid conclusions as to the quality of care in Arkansas. It also allowed us to feedback information to all state hospitals in a value neutral manner. That is to say, we provided institutions with a snapshot of the nature of care in our state without calling attention to an individual provider's deficiencies. While this disorder is not on anyone's top ten list of critical diseases, it did involve a widely used drug whose frequently overlooked complication can be life threatening. Hospital personnel and their medical staffs were uniformly positive in their response to receiving this kind of communication. We discovered that a statewide mailing of a clinically relevant study based on a valid statistical sample with clear-cut conclusions and suggestions for change sold itself to recipient medical staffs. Written comments clearly indicated that medical staffs enjoyed receiving statistically based clinical information and actively discussed the material and its impact on their clinical practice during their administrative meetings.

This initial success paved the way for subsequent, larger projects and good community participation. We continued to utilize statewide populations and created

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samples of randomly selected patients stratified by institutional characteristics. This methodology provided a generic benchmark by which hospitals compare their own performance. This approach has been used in two very successful projects examining the use of prophylactic modalities to prevent stroke in patients with atrial fibrillation and the effective and efficient use of heparin in the treatment of deep venous thrombosis. While an occasional hospital has expressed interest in receiving hospital specific data, we have found that most institutions appreciate getting a neutral benchmark that motivates the internal collection of data for comparison. We have facilitated this behavior by providing relevant bibliographies, reprints, data abstraction tools, and technical assistance to any hospital so interested. AFMC's efforts have been very successful in promoting voluntary participation and has extended the reach of HCQIP to all institutions with a modest expenditure of resources. As a result, Bruce Vladeck presented AFMC with a Bureau Director's Citation at the 1994 HCFA PRO Leadership Conference in Baltimore.

Highlights of some of our projects follow. Atrial fibrillation and stroke prevention was communicated to 79 hospitals with very strong medical acceptance. The heparin project was communicated to 79 hospitals with 43 hospitals developing treatment protocols and clinical pathways. Our perioperative antibiotic project resulted in over 30 hospitals engaging in either internal data collection or quality improvement programs. We currently have a statewide project in blood transfusion audit criteria undergoing evaluation and dissemination. Our radical prostatectomy project did not directly involve a hospital, but rather resulted in a statement by the statewide urologic association on the appropriateness of radical prostatectomy in the very old. An assessment of laparoscopic cholecystectomy has evolved into a statewide project involving the Arkansas chapter of the American College of Surgeons and an assessment of the use of this procedure statewide. Review of IPPB coding will involve a statewide education information campaign concerning the appropriateness of its use even when not coded for reimbursement purposes.

In order to document quality improvement activities, we have had to develop internal methods to track projects involving nearly 80 hospitals. Our education outreach staff has successfully created an information grid that captures a hospital's activity as it assesses and responds to HCQIP data. To analyze the impact of our projects, we are creating a project assessment scale to grade the involvement of an individual facility with a particular HCQIP project. This rating grades the institutional responses to the project's recommendation. In retrospect, while not all hospitals have created formal CQI projects, HCQIP activity has enabled many institutions for the first time to collect systematic

chart information for internal quality assessment. Thus, AFMC has facilitated changes in hospital culture toward an acceptance of data driven quality improvement. This scale has been adapted by HCFA for assessment of projects throughout the country.

The above efforts have been centerpieces of HCQIP activity in Arkansas. They have been communicated to physicians in Arkansas by our eight-page quarterly newsletter. Nevertheless, we have embarked on several other projects stemming from successful efforts in other states or suggestions from HCFA to explore certain topic areas. A few projects have focused on a small number of institutions that were found to be outliers by pattern analysis or anecdotal case reports. These latter projects are very important to maintain the integrity of the Medicare program, but have a far less generalizable application to the provider community as a whole. We expect that this mix of original and derivative statewide projects in combination with focused outlier audits will continue into the future.

In summary, the first 18 months of HCQIP has positioned AFMC whereby its information is well received and respected by the vast majority of facilities in the state.

For the second half of the contract, we plan to extend our project management team and increase the number of contacts to participating hospitals to facilitate their implementation of quality improvement techniques within their institution. Projects currently in the data collection stage include statewide assessment of laparoscopic cholecystectomy, and emergency room treatment of hypertension in patients presenting with stroke. We also have in protocol development projects on advance directives, right heart catheterization, conservative therapy of breast cancer, and performance of endoscopic retrograde cholangiopancreatography. AFMC will be a beta test site for a national quality indicator module on UTI and we are gearing up for a major educational effort for the Cooperative Cardiovascular Project in 1995. We will conduct regional outreach activities on these topics in the year ahead. Similarly, AFMC has sponsored two statewide quality improvement conferences in Little Rock. Finally, we will be developing a public education unit to bring HCQIP messages to patients in Arkansas.

Clearly, AFMC has had an active 18 months under the Health Care Quality Improvement Program. Virtually every acute care hospital in the state has received communications on HCQIP projects and most have participated in at least one local improvement effort. AFMC personnel have taken an active role in national committees and symposia to share our methodologies and enthusiasm for this new contract. We believe we have been successful in forging new bridges to the physician and hospital community and are positioned for even more effective projects in the near term future.

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AAFP

Family Physician of the Year

*Leslie F. Anderson, M.D.
of Lonoke, Arkansas*

Caring, trusting and responsive are words used to describe Dr. Leslie F. Anderson by patients, friends and peers. Patients say Dr. Anderson has continually proven himself as an outstanding family physician. He embodies, as one testimonial letter noted, "the heart and soul" of family practice.

Leslie F. Anderson, M.D., a board certified family physician practicing in Lonoke, Arkansas, has been named the 1996 *Family Physician of the Year* by the American Academy of Family Physicians (AAFP).

"Dr. Anderson successfully mixes modern day medicine with the true image of the trusted family doctor of years past," said Linda McGhee, president of the AAFP's Arkansas Chapter. "We are very honored and proud to have Dr. Anderson as the award recipient representing the academy. He is a wonderful role model and asset to our state."

Dr. Anderson was nominated by the state chapter for the national award and had previously been honored as the *Arkansas Family Physician of the Year*.

He was presented with the national award during the opening session of the Congress of Delegates (AAFP's governing body), which immediately precedes the Academy's Annual Scientific Assembly, held recently in Anaheim, California. Given annually since 1977, the award is one of the organization's highest honors.

Each year a panel of outside judges selects the award recipient based on the following criteria. The physician must provide his/her community with compassionate, comprehensive, and caring medical service; be involved in community affairs and activities that enhance the quality of life of his/her home area; and provide a credible role model as a healer and human being to his/her community, especially, to young physicians in training and to medical students.

This year's judges were: Congressman Tom Coburn, M.D. (R-OK), Patricia Olsen-Mathews, Producer, CBS News This Morning; Dr. Janelle Goetchus, 1991 Family Physician of the Year; Dr. David Mercy, President of the Family Practice Residency Directors Association; and Patsy Shawver, Midwest Regional Salvation Army in Kansas City, MO.

Instrumental in establishing the specialty of family practice in 1969, the Academy is a national professional organization representing more than 80,000 family physicians, family practice residents and medical students. The Academy, headquartered in Kansas City, Missouri, is dedicated to providing quality continuing medical education to its members.

Leslie F. Anderson, M.D.

1996 AAFP Family Physician of the Year

Personal Information

Parents: I.F. and Letitia Anderson

Wife: Cheryl Roberts Anderson

Children: Rhelinda, Sissy and Kristen

Resident of Lonoke, Arkansas since 1950

Office: Anderson Medical Clinic,
1310 North Center, Lonoke, AR 72086

Education & Credentials

Graduate of Lonoke High School

Graduate of Univ. of Central Arkansas BS-Biology

Graduate of University of Arkansas for
Medical Sciences MD-1971

Rotating Internship St. Vincent Infirmary
Little Rock, AR 1971-1972

Board Certified ABFP - Recertification thru 1998
Fellow AAFP



Dr. Anderson was recognized by the Arkansas General Assembly on Oct. 18 during Special Session. From left: Sen. Jean Edwards of Sherrill; Rep. Billi Fletcher of Lonoke; Dr. Anderson and his wife, Cheryl, and Sen. Jay Bradford of Pine Bluff.

Military Service

Arkansas Air National Guard - 198th TAC

Recon. Group

Clinic Commander

Rank of Major 1971-1978

Honorable discharge from Inactive Reserve status - 1993

Honors

Appointment to State of Arkansas Criminal Detention Facilities Review Committee by then Governor Bill Clinton - asked to write program for uniform state jail standards

American Medical Association Physician Recognition Award 1995-1996

Arkansas Family Physician of the Year - 1994-95

Burgess Council - University of Central Arkansas

Who's Who in American Colleges and Universities

Who's Who in Arkansas American Legion scholarship/citizenship award - Senior year in High School

Medical Practice Profile

General family practice, limited surgery

Practiced obstetrics until 1987, delivered over 2,000 babies

Primary hospital is Rebsamen Regional Medical Center (located 18 miles from practice with rounds twice daily)

Currently, Vice Chief of Staff; Chief of Staff -1981

Initiated Bylaw changes in 1985 to form the Department of Family Practice at Rebsamen

First Chief of Family Practice 1985-1986

Served on Rebsamen's Planning Committee during construction/expansion

Presently, serving on Ethics Committee and Home Health Advisory Committee

Continues to make house calls and nursing home calls (using his tackle box for a doctors bag).

Miscellaneous

Serving on Arkansas Activities Association Physicians Advisory Committee

Serving on Professional Counseling Association Physician Advisory Committee

Lonoke Junior and High School team physician 1976 - present

Resource Speaker for civics clubs and Lonoke Public Schools - Presenting programs on smoking cessation, drug and alcohol awareness, AIDS awareness, breast cancer awareness, sexually transmitted diseases and family planning

Clinical preceptor for UAMS - Teaching medical students and family practice residents

Guest speaker at University of Arkansas at Little Rock Law School on medical malpractice issues

Served on both Junior and Senior High School Advisory Committee - Lonoke Public Schools

Serving on Pharmacy and Therapeutics Committee for Health Advantage HMO

Hobbies: Flying; have private license, water skiing, snow skiing, growing flowers, model railroading and photography

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Cutting Red Tape on Clinical Labs: Why Congress Should Deregulate Doctors

Sandra Mahkorn, M.D., M.P.H.*

INTRODUCTION

While Members of Congress try to reform Medicare and reduce the paperwork burden on doctors and patients, they also should realize that doctors' medical laboratories are caught in a web of government red tape that adds billions of dollars to America's health care costs. This misguided regulatory intervention is based on faulty data; has caused the loss of private, physician-based laboratory testing by thousands of doctors throughout the United States; and has compromised patient access to timely, high quality care for millions of Americans. To eliminate unnecessary regulation of the health care sector of the economy and improve both the productivity and efficiency of patient care, Congress should eliminate the burdens imposed on doctors by the Clinical Laboratory Improvement Amendments of 1988. This can be done easily within the broader context of Medicare reform.

The Clinical Laboratory Improvement Amendments of 1988 (CLIA) constitute the nation's most sweeping regulation of physician-based laboratories. Under CLIA, doctors must submit to regulatory requirements for the simplest and most common tests used in the routine treatment of patients, including tests for pregnancy and strep infections. According to the Health Care Financing Administration (HCFA), the U.S. Department of Health and Human Services (HHS) agency that administers Medicare, Medicaid, and CLIA, implementation of CLIA adds between \$1.2 billion and \$2.1 billion annually to the cost of performing clinical laboratory tests in doctors' offices.¹ To the extent that they are aware of them at all, most taxpayers probably think laboratory regulations affect research centers, hospitals, or other facilities staffed by white-coated researchers in sterile rooms filled with exotic

equipment. CLIA applies to these entities, but it also reaches into the two-room doctor's office in New York's central Harlem and the private practice of an internist in Ames, Iowa. As Representative Bill Archer (R-TX), Chairman of the House Ways and Means Committee, has noted:

The CLIA restrictions have caused thousands of physicians to discontinue all or some portion of essential clinical laboratory testing in their offices. This creates a barrier to patient compliance with diagnostic treatment protocols and causes patient inconvenience. For example, for many tests a patient must be referred to an outside laboratory to have a specimen taken and tested. This poses a substantial hardship for many patients, most notably the elderly, the disabled and families who live in underserved areas. Often times, these patients cannot travel or find someone to take them to these facilities. The result is that they do not obtain the necessary testing.²

Doctors and hospitals must struggle with mountains of government-generated paperwork to comply with thousands of pages of rules, regulations, and guidelines promulgated by the Health Care Financing Administration.³ As Congress debates Medicare's future, particularly how to ensure its financial solvency and stability, it also must address the impact of these rules and regulations on doctors, hospitals, and private medical practice. Though responsible for only a part of this paperwork burden, CLIA's impact on private medical practice has been significant. Not only is it costly; it has lowered the quality of patient care by causing unnecessary changes in office practice: inconvenience for doctors and patients alike, decreased patient access, and diagnostic delays.

In recent years, Members of Congress have begun to rethink CLIA. For example, Representative Archer and Senator Kay Bailey Hutchison (R-TX) have introduced legislation to correct CLIA's excesses. Representative Archer's Clinical Laboratory Improvement Act Amendments of 1995 (H.R. 1386) would exempt

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physicians' office laboratories from CLIA rules. Senator Hutchison has introduced similar legislation (S. 877). To reform the American health care system, especially the bureaucracy that runs federal health programs, Congress should lift this unnecessary burden on the expeditious delivery of high-quality health care.

THE ROOTS OF LAB REGULATION

CLIA is rooted in congressional deliberations almost thirty years ago. When Wilbur Cohen, Secretary of the U.S. Department of Health, Education and Welfare (HEW), and Dr. D. J. Sencer, Director of the U.S. Public Health Service's Communicable Disease Center, appeared before the House Committee on Interstate and Foreign Commerce on May 2, 1967, they testified that the error rate in laboratory testing was as high as 25 percent. Secretary Cohen's testimony also included a sensational case of a woman who lost her breast because of a lab error that occurred in 1936.

Dr. F. William Sunderman, noted pathologist and father of the quality control methodology known as proficiency testing,⁴ challenged Dr. Sencer's testimony. Along with other noted pathologists, Dr. Sunderman questioned the statement that "erroneous results are obtained in more than 25 percent of all tests analyzed." Dr. Sencer responded but included no timely supporting data, except for the results of analyses done by Dr. Sunderman himself 22 years earlier in 1945,⁵ before the laboratory profession voluntarily began to conduct proficiency testing.

Based on the archaic data presented by HEW (predecessor of today's HHS) and fueled by the political intervention of Senator Jacob Javits (R-NY) and a front-page story in *The New York Times*, Congress passed the Clinical Laboratory Improvement Amendment of 1967. Members of the professional medical community protested. Twenty-two pathologists submitted refuting testimony, delineating numerous technical errors in previous HEW testimony, but to no avail.⁶

In 1980, Dr. Joseph Boutwell, Deputy Director of CDC's Bureau of Laboratories, charged that there was a 14 percent error rate in some of the most commonly performed medical tests. Dr. Boutwell eventually admitted his estimates were much too high,⁷ but no anxious reporters were waiting to publish the CDC's retraction of the misleading data. The damage had been done. Boutwell's error laid the foundation for a governmental grip on laboratory and medical practice that became increasingly stifling as the 1980s came to a close.

Twenty years after CLIA '67, in 1987 and 1988, federal regulation of laboratories again surfaced with naive and sometimes sensational articles in the *Wall Street Journal*, *New York Times*, and *Ladies Home Journal*. A February 1987 *Wall Street Journal* article, "False Negative: Medical Labs, Trusted as Largely Error-Free, Are Far from Infallible," by Walter Bogdanich began, "It

was 4:30 a.m. when cancer finally choked the last breath of life from Janice Johnson. She was 34 and the mother of two, and she died never knowing why her disease had been so unforgiving." Describing this and several other negative outcomes of laboratory error, the story railed against the lack of government regulation of laboratories, focusing on Pap Smears and shopping mall cholesterol screening. Members of Congress held a frenzy of media-oriented hearings. Senator Brock Adams (D-WA) called as a witness a woman who had cancer of the cervix, but an expert reviewer of a preceding malpractice suit indicated that no laboratory error was involved.⁸ Unfortunately, no HCFA or CDC witness ever acknowledged that "not only did they already have jurisdiction over the so-called Pap mills, which they did under CLIA '67, but also that they could have closed any one of them at any time if they elected to do so."⁹

The federal regulatory locomotive steamed along with unrelenting speed, and Congress passed CLIA '88. Pamela Nash, Director of Governmental Affairs for the American Association of Clinical Chemists, called it "legislation by anecdote, not by overwhelming evidence, and not by an understanding of this very complex and technical field."¹⁰

The scope of CLIA '88 is daunting. It includes not only the 13,000 laboratories regulated by CLIA '67, but also an estimated 100,000 to 150,000 physician office labs. CLIA's real significance, however, lies not in its numerical reach, but in its jurisdictional impact. For the first time, Congress established federal authority to regulate the practice of medicine, and the regulatory regime expanded dramatically. Sponsored by Representative John Dingell (D-MI), the eight-page bill led to 1,600 pages of bureaucratic regulation after a three-and-a-half year gestation period.

Congress gave the Department of Health and Human Services the authority, under CLIA, to regulate laboratory testing tools and procedures employed in a physician's office. The agency responsible for drafting the regulations was HHS's Health Care Financing Administration. Despite the fact that many simple and accurate technologies would qualify for a certificate of waiver because so many of these tests "have an insignificant risk of an erroneous result" or "pose no reasonable risk of harm to the patient if performed incorrectly,"¹¹ only nine tests were exempt.

Moreover, HCFA has not proven to be a model of flexibility in granting waivers. As a result, the same paperwork that is required of the megalabs is required of individual physicians.

Physician laboratories that perform only an occasional test for mononucleosis now must conduct two additional control specimens, tripling the cost of the test. Proficiency testing¹² is required for all tests regardless of where they are performed. The list of regulatory

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requirements is considerable and has prompted a cottage industry of physician office lab consultants. As Michael Jahn, senior editor of the *Medical Laboratory Observer*, has noted, "With or without extra schooling, CLIA is providing a sizable number of laboratorians with new career options. Nearly one-third of respondents (30%) report that they or a colleague in their laboratory have begun acting as a consultant to POL's (physician office labs) as a result of CLIA."¹³ Few busy physicians could keep up with the reams of regulations and the frequent revisions and additions generated by regulators. In a letter to the White House shortly after the regulations were issued, an Iowa doctor poignantly described his dilemma: "I have taken what little time I have and consulted laboratory personnel, laboratory directors in larger hospitals, paid and sent for materials explaining the standards, and spent several thousand dollars in equipping and changing our laboratory to meet many of the regulations that are impacting our office at this time."¹⁴

The final HHS regulations, drafted by HCFA officials, became effective at the end of 1992. In 1993, however, it appeared that even members of the Clinton Administration recognized that CLIA was an unnecessary burden. Initial drafts of Hillary Clinton's health care reform proposal, leaked in September 1993, would have provided substantial "CLIA relief." But as the health care reform debate intensified, concessions to powerful liberals in Congress led to the unraveling of any CLIA reform efforts on the part of the Administration.

In the meantime, thousands of physicians have closed their simple labs; numerous on-site testing kits and devices, once in the pipeline, have been scrapped; and countless patients have fallen victim to diagnostic delays or, in some areas, to complete lack of access to simple, on-site diagnostic technology. Ironically, though CLIA '88 mandated on-site proficiency testing for technicians interpreting Pap smears—the very problem that generated the legislation—this testing still has not been implemented.

A LAW IN SEARCH OF A PROBLEM

A Personal Observation. One day, after an extended weekend vacation, I returned to my office a little early, knowing that I would be facing a five-day pile of mail. While sifting through test results that had been returned, I came across a positive strep screen. The patient's throat had been only slightly infected, and I had performed a throat culture that was sent out to the reference lab. Had this been 1991, I would have performed a simple strep screen, realized treatment was needed, and sent her on her way, prescription in hand. She had gone untreated for five days, but had not developed rheumatic fever. She was lucky, and I was relieved. Months earlier, we had been advised by

hospital laboratory consultants that it would be better to eliminate any test that the CLIA bureaucrats considered "moderately complex" because the cost of complying would be too high. Since we served the poor and the Medicaid population, we knew the projected threefold price increase for doing strep screens under CLIA would be prohibitive. I thought back to my experience in Africa several years earlier. My patients there had access to more on-site testing than patients in my inner-city clinic in 1995. Moreover, my practice was not unique. A January 1994 article in the *Journal of the American Medical Association* indicated that because of CLIA, almost a quarter of all pediatricians had stopped or had planned to stop office testing for strep infections.¹⁵

The 1988 legislation mandated that five studies relating to the relevance and impact of CLIA be conducted by 1990,¹⁶ two years before the final regulations were issued. One mandate required HHS to examine the validity, reliability, and accuracy of proficiency testing, something physicians' office labs now must perform three times a year, and at considerable cost, for each non-waived test they conduct on-site. Today, proficiency testing is a multimillion-dollar business, with most of the testing performed by the College of American Pathologists. Another mandate required an examination of the "extent and nature of problems in the diagnosis and treatment of patients caused by inaccurate laboratory test results."¹⁷ By the time the final regulations were published in 1992, not one of these studies had even been initiated; HHS officials complained no funds had been allocated. Federal bureaucrats were unwilling or unable to spend a few million dollars to conduct research that might have guided the regulatory pen. Nonetheless, HHS officials had no hesitancy about charging ahead with a final regulation that would cost consumers billions of dollars.

In 1992, after issuance of the final regulation, the *Archives of Pathology and Laboratory Medicine* conducted a literature search to determine the impact of laboratory errors. The "bottom line" question was whether testing errors that occurred in physicians' offices before CLIA '88 resulted in negative health outcomes for patients. The question could not be answered because the data did not exist. Only one hospital-based study even examined the impact of testing errors. Of the 328 patients involved in those incidents, not one was "harmed."¹⁸ No true outcomes data existed for physicians' offices.

In other words, there are no data showing that patients are harmed as a result of testing in the physician's office as opposed to a reference lab. In fact, recent evidence collected by the Ambulatory Sentinel Practice Network (ASPN) suggests that sending specimens off-site for analysis may increase the likelihood

of lab error.¹⁹ Consistent with earlier research, the ASPN found that 83.4 percent of lab test-related problems occurred before or after actual performance of the test itself (pre- or post-analytical); 75 percent of all identified problems occurred in tests referred to an outside laboratory. Of the ten problems judged to have a significant impact on patient care, half occurred because specimens were delayed or lost—hazards related to transporting specimens to outside labs. The logical interpretation: Because fewer tests are performed on site, more negative outcomes are likely.

RISING COSTS

CLIA was not supposed to add to America's tax burden, but recent HHS budgets have seen millions of dollars allocated to various agencies for CLIA-related costs. Because physicians and laboratories must assume the many extra costs attached to CLIA, charges are likely to be passed on to working families, adding to the health care cost-shifting they already experience from Medicare and Medicaid. Of course, HCFA officials know this: "The final rule will significantly increase the operating expenses of the nation's laboratory industry—perhaps by as much as 6% per year. Most laboratories will successfully pass on these cost increases to patients and other consumers of their services."²⁰ Officials felt they could even predict how "willing" the public was to pay the extra costs: "We project that non-poor American households may be willing to pay anywhere from 5 percent to 25 percent more for laboratory services...."²¹ At the same time, however, "many physician offices may see their laboratory costs increase by 10 percent or more—and the cost of an average test rise in excess of a dollar."²² HCFA's glib analysis reflects government's failure to understand "real world America." With medical overhead costs already running over 60 percent and tens of millions of uninsured unable to pay for basic health care, CLIA has forced tens of thousands of physicians' office labs to curtail their operations or shut down altogether.

Though HCFA officials acknowledged that CLIA would add \$1.2 billion to \$2.1 billion to America's health care cost burden in 1994 alone, and even more in later years,²³ they failed to account for many other cost factors:

X Abrupt changes in practice patterns and the number of POLs that would cease operation;

X The cost of return visits to have test results, previously often available at the time of the initial visit, explained and a treatment regimen advanced or initiated;

X Unnecessary hospitalizations and emergency room visits when a physician cannot perform certain tests

in the office because of excessive administrative and regulatory costs;

X Increased morbidity and complication rates from diagnostic delays and difficulties in notifying patients of serious problems because tests now are sent out and the results not returned until at least the next day; and

X The dramatic market shift that would make this new technology inaccessible.

Yet these officials did not hesitate to impose a multibillion-dollar regulatory burden even though "These cost increases may reduce the ability of certain already-financially burdened providers to deliver services, and of the poor, uninsured, and underinsured to obtain needed care."²⁴ And they showed no hesitation over imposing substantial administrative "hassles" even though "there exists no irrefutable evidence demonstrating that the clinical laboratories or public health status will improve tangibly under our regulation."²⁵ Even HCFA officials concede that CLIA rules are expensive. But, given the dramatic change in physician office labs and the testing device industry, it may be impossible to quantify their broad financial impact.

ADDITIONAL PAPERWORK FOR DOCTORS

An ancillary benefit of the national debate on the future of Medicare, the huge and financially troubled government insurance program that covers approximately 38 million elderly and disabled Americans, is that taxpayers finally are learning about the mountain of paperwork generated by this bureaucratic system. According to Nancy Dickey, M.D., a practicing family physician and Vice Chair of the Board of Trustees of the American Medical Association (AMA), "It has been estimated that physicians now spend over 25 percent of their time processing paperwork and complying with the technical requirements of an unending blizzard of Medicare regulations. This is time that could be used more productively treating patients."²⁶ This burden has been growing without interruption for many years. In a survey conducted by Louis Harris and Associates on behalf of the Physician Payment Review Commission (PPRC), an independent panel that advises Congress on physician payment in the Medicare program, seven out of ten physicians expressed deep concern over administrative "hassles" and further expressed the view that "red tape" is worse in Medicare than in any other insurance plan, including managed care plans and Medicaid.²⁷

CLIA's regulations are making matters even worse, yet there is no evidence additional lab regulations, paperwork requirements, costs, inspections, and proficiency testing improve the quality of medical care.

The Texas Medical Association surveyed Texas physicians in 1994 to determine whether they felt CLIA improved quality. Sixty-eight percent said "no," and only 7 percent responded affirmatively. An American Association of Dermatology survey yielded even more striking results: 97 percent of respondents saying CLIA did not improve accuracy and 82 percent expressing the opinion that CLIA "reduced the overall quality of care." These sentiments are not confined to doctors. According to a 1994 survey published in *Medical Laboratory Observer*, "Roughly two out of three laboratorians feel CLIA has failed to improve the quality of patient care and has adversely affected the clinical laboratory profession."²⁸

Some professional medical organizations have attempted to help physicians comply with CLIA rules by publishing "How To" manuals. These manuals, often inches thick, describe the tedious documentation required under CLIA. Keeping up can be a full-time job. HCFA's voluminous regulations constantly germinate and spawn revisions, retractions, and additions. The Texas Medical Association analyzed the labor and administrative overhead resulting from implementation of CLIA and discovered that added costs average \$10,000 per year per physician office lab site, with one three-person practice running additional costs of \$36,000.²⁹

CLIA'S IMPACT ON MEDICAL PRACTICE

Taxpayers should realize that, in principle, CLIA '88 represents a profound change in federal policy. It is the first time the government has succeeded in planting its foot in the physician's office to regulate the everyday practice of medicine. This forerunner of government-run medicine should not be dismissed lightly.

Physicians consider testing devices "tools of the trade" in much the same sense as a stethoscope, blood pressure cuff, or thermometer. They use laboratory tests to confirm what they already expect as a result of their clinical judgment. An ophthalmoscope is an instrument a physician uses to look at the back of a patient's eyeball. What the doctor sees there can reveal many things about the patient. In principle, a physician's use of a microscope to look at blood from that same patient should be regulated no more than his use of an ophthalmoscope or a stethoscope. All are tools that allow the physician to develop a more complete picture of the patient. The ironies are innumerable. A dermatologist may inspect a skin lesion with a magnifying glass or under a special fluorescent light (Wood's lamp), but scraping off a few flakes of skin to examine under a microscope is a federally regulated lab activity. But most patient laboratory testing errors are not caused by the testing device or procedure itself (7.3 percent); they are attributable to events

occurring before (preanalytic, 45.5 percent) or after (postanalytic, 47.2 percent) the test itself was performed.³⁰

Lab Closures. It is estimated that 50 percent of all laboratory testing occurs on an out-patient basis. Before CLIA '88, physician office laboratories were the most rapidly expanding segment of the laboratory industry, representing about half of all outpatient lab testing in 1986.³¹ The projected annual growth rate for this sector was about 16 percent through 1990.³² According to recent CDC data, of an annual total of 4.2 billion tests physicians' offices now perform 294 million per year, or only 7 percent of the total.³³ Pre-CLIA projections were for 2.7 billion tests performed in physicians' offices.³⁴ By all estimates,³⁵ the 1994 CDC data represent a dramatic departure from predictions just a few years earlier and have stunning implications for the future of the market. The American Academy of Family Physicians noticed a particularly steep drop. When asked, "Do you perform *any* clinical laboratory tests in your office?" only 78.9 percent responded that they did. A few years earlier, the same question elicited a 93 percent affirmative response.³⁶

The 1994 Texas Medical Association study found that CLIA's impact was greatest among the primary care specialties. Thirty percent of Texas family physicians and general practitioners, 19 percent of pediatricians, and 20 percent of OB/GYNs have closed their labs because of CLIA,³⁷ while 57 percent of OB/GYNs, family physicians, and GPs and 59 percent of pediatricians have stopped doing some tests because of CLIA. The American Academy of Dermatology found the same thing when it surveyed its members at a February 1995 conference: 75 percent of dermatologists had eliminated testing altogether or cut the number of tests they did in their offices, while 82 percent felt CLIA led to a reduction in the overall quality of care.³⁸

Factors other than CLIA, such as the growth of managed care, are often cited as responsible for this shift in practice patterns. However, in a survey of family physicians, among those who felt their in-office testing capabilities were insufficient to meet the needs of their patients, "too much government red tape" was mentioned by over 90 percent as the main reason.³⁹

Advances in lab technology were promising before CLIA '88. The development of highly accurate test kits and devices, as simple to use as home pregnancy testing devices and home blood sugar monitors, was skyrocketing. These testing devices were subject to rigorous FDA approval standards. But with imposition of CLIA '88, potential markets for the promising new technology quickly disappeared. Some large companies abruptly changed course. Some persevered, finding new markets for their on-site diagnostic tests in European and Third World countries.

Consider the computer industry. In the beginning, there were the big mainframes. Giant computer

"brains" were needed to store masses of data that now can be stored in a small shoe box-size container that fits comfortably beneath a desk. Data entry was tedious and depended on keypunch operators and stacks of manila cards with various patterns of rectangular holes. Extracting and manipulating data was equally challenging, requiring a sophisticated understanding of computer language. Problems were common. Computers required a special expertise. Over the past two-and-a-half decades, however, computers have become efficient, "user friendly," and relatively problem free. Even children have become computer literate, fail-safe systems have eliminated data loss crises, and machines that once required moving vans can be tucked away in the side compartment of a carry-on bag.

But imagine that as the technology improved, as it became smaller and simpler to use, as it became available to the average person, the federal government required all purchasers and users of the new laptops to purchase and possess a license to use them, to keep log-in records, and to be inspected and tested on their ability to use correctly each item of software they loaded onto their hard drives. That, in effect, is what CLIA '88 has done to the clinical laboratory community. As the technology has become more accurate, user friendly, and available to the primary care physician, costly regulations and red tape have caused tens of thousands of physicians to lock up their labs.

Not all lab tests are subject to the rigors of CLIA. Nine are "waived." Three of these are available to the public for home use, three were invented before World War II, and the urine dipstick test has been available for well over three decades. CLIA's "Complexity Model" indicates that the new technology is what should worry Americans.⁴⁰

Strep throat screens, for example, have been labeled "moderately complex" even though they are as simple to perform as home pregnancy tests. A 1992 study published in the *Journal of the American Medical Association* found that sixth and seventh grade students in the Augusta, Georgia, public schools were able to perform this test with 95 to 100 percent accuracy on their first attempt after reading the directions.⁴¹

Because their performance was so successful on the first try, the study was unable to demonstrate a learning curve. CDC's "moderate complexity" ranking, for this test and for others using the same technique, has resulted in abandonment of on-site labs in thousands of physicians' offices across the United States.

Such results and incongruities call CDC's entire complexity model into question. This model depends on subjective ratings of testing devices against several arbitrary criteria. Despite its far-reaching impact, however, federal bureaucrats never tested its real-world validity and reliability before it was imposed on the testing device marketplace and physicians' offices.

The CLIA Police. The CLIA police were out in force this past year. Thousands of physicians' offices were cited for violations, the vast majority of which were procedural and paperwork irregularities irrelevant to patient care. Penalties for noncompliance can be as high as \$10,000 a day. While the fines on doctors can be onerous, in many cases the inspectors themselves do not know the first thing about patient care. A New York dermatologist, for example, was surprised to find that he was being inspected by a former patient who had been an unemployed engineer.

Unquestionably, the federal regulatory police did find deficiencies in the labs. But the vast majority were classic bureaucratic transgressions related to neglected paperwork and documentation errors: a missing signature, for example, or the lack of procedure manuals (which no one consults anyway). Just as CLIA regulatory policy promotes the "dark ages" of testing techniques, it also represents a throwback to the dark ages of quality management. Modern quality management addresses outcomes. In not one instance can CDC officials say with certainty that adhering to any aspect of this strangulating body of regulation improves the outcome for the patient.

REGULATING WITHOUT SCIENTIFIC CONSENSUS

Within the scientific community, a great deal of discord exists regarding CLIA. In the multimillion-dollar proficiency testing business, for example, manufacturers of laboratory "instruments and reagent systems design and then manage and control the manufacturing process to ensure consistent results on fresh, human specimens." But there are a number of flaws in the proficiency testing program. One is that materials sent to physicians' offices to test the accuracy of their results frequently are taken from chickens or cows, often are frozen and thawed numerous times, and frequently have to be reconstituted when received.⁴²

Even the founder of proficiency testing, Dr. F. William Sunderman, opposes using it as a regulatory device.⁴³

Proficiency testing was never intended to be a regulatory tool. No existing studies link better scores on proficiency testing to improved patient outcomes. Many scientists have raised questions about the very nature of proficiency testing specimens (analytes). Proficiency testing specimens that are accurate for one type of machine often are not appropriate for another. Often, these analytes are non-human materials. For example, measuring a physician's ability to perform accurate testing on chicken blood has become the important regulatory measure of excellence, but medical device manufacturers sought to develop on-site testing devices that would perform best on fresh human serum. Now promotion of their products depends

more on passing proficiency tests on chicken sera than on accuracy in testing human blood.

Cutting Services. CLIA 1988 unquestionably has dampened and even deadened on-site laboratory testing and the promise it held. Because of the formidable regulatory costs and the realization that patients and the health care system cannot afford any additional financial burden, physicians have closed and cut back on many services they once offered their patients, in many cases for free or at "break even" rates. Testing devices are relegated to dark corners on storage shelves, and microscopes have been boxed. To escape CLIA's costly embrace, and to be classified as a "waivered" lab, doctors often have traded 1990s' technology for pre-World War II models like copper sulfate hemoglobin analyses and centrifuge-generated hematocrits.

But patients are the real losers. The ultimate financial burden generated by the additional costs of paying for cholesterols and strep cultures performed in outside laboratories rests with them. They must endure the unavoidable delays that result from sending specimens off site, or the preanalytic and postanalytic errors that make up the bulk of laboratory testing problems. They have to take more time off from work. They have to pay "Elderbus" fares for return visits that now have to be scheduled to discuss test results after they have come back from outside labs.

But no data show, and no scientific research confirms, that a major national problem ever existed. The inconsistencies in the federal "complexity models" and "quality standards" are apparent. A 20 percent failure rate is acceptable in screening for cervical cancer, but an elevated cholesterol level must be more accurate than most physicians feel is necessary to make treatment decisions. Even worse, the problem that initiated this federal fiasco—erroneously read Pap Smears—still has not been addressed. Despite the specific attention given to this problem in the original legislation, on-site proficiency testing for this cytology test has not even been started.

THE BUREAUCRACY'S EXCUSES

The office of the HHS Inspector General (IG) recently conducted a study to determine whether CLIA resulted in laboratory availability problems for Medicare patients. The conclusion: "The CLIA appears not to have affected physician ability to secure laboratory services for their patients."⁴⁴

This report represents a stunning lack of understanding of the important issues surrounding CLIA. Instead of addressing the effects of CLIA's its conclusion deals with physicians' efforts, despite regulatory obstacles, to secure needed health services for their patients. But the lack of availability of tests was never

the issue. No one said patients would not be able to obtain tests; Americans no longer depend on the pony express, and medical tests can be sent to, or performed at, reference laboratories. The issues that were not addressed are precisely the ones that should have been: issues that relate to increased inconvenience, increased costs, lack of immediate access to test results, consequent treatment delays and the need for follow-up visits, and—most important—the inevitably decreased quality of care and increased morbidity.

In other words, the IG's study failed to address the very issue—quality of care—that formed the impetus for the Clinical Laboratory Improvement Amendments. It also failed to analyze CLIA's impact on physician practice patterns after the final regulations took effect. Surveys by professional organizations indicate that CLIA's major impact on physician practice occurred after the final regulation took effect in late 1992.⁴⁵

Hence, the data regarding the impact on physician office practice prior to that time are irrelevant.

The IG did find that "CLIA appears to have some effect on the volume and types of tests being billed by POLs. Shifts from moderate and high complexity to waived testing procedures are evident...."⁴⁶

But that finding is, in effect, an admission that physicians have returned to pre-World War II technologies. Most of the highly accurate, new on-site tests are out of reach for the "waivered" site.

Consider what would happen if the HHS bureaucracy's reasoning were applied in any other sector of the national economy. Suppose, for example, that a large plant employing two thousand workers closes down because the owners cannot afford to comply with regulations requiring them to remove asbestos from sealed encasements and inside walls. No scientific study has shown that encased asbestos poses any harm to humans, but publicity related to deaths among asbestos-exposed shipyard workers spills over to cause a rash of regulations not supported by fact. Two thousand workers lose their jobs, but a government study determines that the regulation has had no significant impact because 95 percent of these displaced laborers find work within two years. The lesson is simple: Those who ask the wrong questions get irrelevant answers.

CONCLUSION

Congress can return to reason in regulating clinical labs. Already, new Members are re-thinking how federal regulation has been implemented in the past. Cost-benefit analyses are being considered before any new layers of regulation are imposed. Existing regulations are being reexamined for reasonableness and scrutinized for need. The fact that hundreds of billions of dollars are taken from hard-working consumers

because of regulatory costs added to the price of goods and services finally is being taken seriously.

Fortunately, CLIA's regulatory burdens on doctors and impact on patients have attracted attention in both the House and Senate. In the House, Bill Archer and dozens of his colleagues are leading the effort to reintroduce some sense and sanity to this issue. Representative Archer has introduced H.R. 1386, the Clinical Laboratory Improvement Act Amendments of 1995, and Kay Bailey Hutchison and colleagues are sponsoring a similar bill, S. 877, in the Senate. Congress can release the physician's office from a set of costly and unnecessarily restrictive rules that amount to regulation in search of a problem. By changing policy, Congress can change the environment in a way that benefits both doctor and patient.

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Case Report

The patient was an extremely obese man in his mid-60's who came to the emergency room (ER) physician complaining of sudden, very severe pain in the left side of the abdomen. The patient characterized it as having a "pulling" or "stretching" quality. He gave no history of nausea, vomiting, or diaphoresis. He had been a heavy smoker (one to two packs/day) for 40 years; his alcohol consumption was only social and rare. He had been obese for his entire adult life, but had gained some weight in the last six months. His father had a "heart attack" at age 55, but lived to the advanced age of 94. His mother had died in childbirth when he was small.

The physical examination revealed an obese man who gave his weight as over 250 lb. His blood pressure was elevated at 180/100 mm Hg. The examination of the abdomen was unremarkable except for hypoactive bowel sounds, some tenderness in the lower left side, and marked obesity. The abdomen was said to be markedly distended but no masses could be palpated and there was no mention that auscultation had been done. Blood pressures were not taken in the legs and there was no mention of peripheral pulses. A rectal examination was normal.

Since the pain had been sudden and severe, and due to the difficulties in evaluating this very obese man, he was admitted to the hospital for further study and observation. The admission laboratory tests were unremarkable. The urine was normal. The CBC showed a mild leukocytosis of 13,600/cu mm with a normal differential. The RBC count was reported at 4.700/cu mm with the PCV 41.4% and the hemoglobin 13.6 gm/dl. Chemistries, liver enzymes, and serum lipids were all within the normal limits. The patient's routine medications, Indocin for gouty arthritis, and Lasix for mild hypertension, were continued, and Demerol was ordered for pain.

The attending physician suspected large bowel disease and ordered upper and lower bowel studies. He asked that stool be checked for blood. The patient's pain was severe enough to require narcotics for relief. Reports of these studies showed only a hiatal hernia and some diverticula in the colon, without evidence

of diverticulitis.

The patient continued to have abdominal pain requiring narcotics. Periodic blood pressures were systolic 150 to 180 mm Hg and diastolic 100 to 110 mm Hg. An abdominal ultrasound revealed possible gallstones but no other abdominal masses. The patient had no stools, thus the occult blood studies were not reported.

On the third hospital day, the attending physician received a call from the medical director representing the patient's insurance carrier, stating that since he was not receiving any intravenous fluids, etc., his insurance would not cover him beyond that day; thus the patient needed to be discharged the following morning. The physician had initially called the carrier and suggested to the nurse to whom he spoke that his patient needed more time in the hospital. A discharge order was written for that day. The physician's discharge note reflected the conversations with the insurance company.

The patient was taken to his car, but before he could get in, he collapsed. In the ER, he again complained of abdominal pain, but this time on the right side in the upper quadrant. There was tenderness in the RUQ but no rebound tenderness. Bowel sounds were said to be present. Rectal examination was normal. The stool on the examining glove was described as yellowish-brown and almost liquid. He was again admitted with the diagnosis of abdominal pain.

The attending physician asked for an internist to evaluate his patient at this time. The patient complained bitterly of inability to void, which had not been a prominent part of his previous admission. Catheterization yielded about 20 ml of urine, with some improvement in the pain. The consultant wrote on the ER record, "plan to admit, hydrate, and observe." The patient was transferred from the ER to the floor. The nurse wrote, "In no acute distress. Skin warm, color OK. Complaints of lower abdominal pain." About ten hours after admission, at 5:00 a.m., the patient complained that the Foley catheter did not feel like it was working. At this time the urine was described as "amber." Pedal pulses were felt bilaterally by the nurse but were said to be "weak."

On the morning rounds, the internist wrote that the admission hematocrit was down to 29%, the pain was better, and that he was awaiting the old chart in order to compare with the previous hematocrit. He

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ordered an anemia study. The patient related his continuing abdominal pain to the inability of the Foley catheter to empty his bladder and the lack of a bowel movement.

These complaints continued throughout the day. The anemia study revealed only the low hematocrit and hemoglobin. An enema given about 10 p.m. the second night of this hospital admission yielded "golf ball-like" stool with "much relief."

The following morning, the hemoglobin and hematocrit were continuing to fall. The hematocrit was 24% and the hemoglobin 8.0 gm/dl. The continuing complaints relative to emptying the bladder and the continued obscurity of the origin of the pain led the consultant and the attending physician to request an evaluation by a urologist. The history was reviewed, as was the admission examination. An IVP/cystogram was planned.

In the early evening hours the preparation for the IVP was begun. The patient had experienced pain during the night but had obtained some relief from a K-pad. He requested the bedpan, complained of severe abdominal pain, and collapsed. No blood pressure could be obtained. The code team was called.

The internist came to the hospital and called for the vascular surgeon who came, transferred the patient to the operating room, and, after intubation and induction, opened the abdomen to find a ruptured abdominal aneurysm. At least 4,000 ml of blood were present in the abdomen. The aorta was replaced from below the renal arteries to the iliac bifurcation, the blood was replaced, and the patient came off the table alive.

He suffered throughout the postoperative period from hypoxic encephalopathy, respiratory distress, and renal failure. He recuperated some, being able to be up in a wheelchair and about six weeks after surgery was transferred to a rehabilitation unit in the hospital. For another six weeks he seemed to be slowly improving. About ten weeks after the initial admission, at 10 p.m. the patient asked for the bedpan. He suddenly stated that he "feels funny." The blood pressure began immediately to drop, the respiration's increased, and the pulse rate became faster. He became progressively short of breath, requiring increasing oxygen. The blood pressure was barely audible at 60 mm Hg systolic. The patient was transferred from the rehabilitation unit to the ER for monitoring. Despite intravenous fluids, controlled respiration, vasopressor, and other supportive measures, the patient died about five hours after the sudden onset of dyspnea. The consultant believed a pulmonary embolus had caused his death.

Loss Prevention Comments

It is easy to second-guess the attending physician and the consultant in this case. This was an exceedingly tough case to figure out. The patient was markedly obese, and his abdominal findings were atypical despite his obesity. The ultrasound had not revealed any masses consistent with an AAA. The pedal pulses were

said to be present but "weak." The symptoms referable to the urinary tract and the constipation were, to say the least, confusing. Between the first and the second admission, the abdominal pain changed from the lower left side to the upper right side. The consultant did not have the previous chart in order to see quickly that the hematocrit had fallen precipitously. Perhaps the physicians "chased rabbits" with bowel studies and urological procedures, but, again, that is easy to say from this perspective.

One must wonder what would have happened had the patient not been discharged. At least, the rupture and collapse would probably have occurred under more controlled conditions. More than likely, the attending physician and the consultant would have arrived at a vascular diagnosis with a little more time to study this very confusing patient. What can we learn? It must be obvious from this record that the attending physician did not agree that this patient was a candidate for discharge when he received the "word" from the medical director of the patient's insurance carrier that his patient would not be covered beyond that day. It must be a principle that we do what is clinically appropriate for the patient regardless of what the insurance company says. The source of payment for the hospital and ourselves must be secondary to our clinical judgment. We must not let anyone, including the patient, pressure us into doing otherwise!

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Brent Robinson, M.D.*

J. David Talley, M.D.**

PERICARDIAL EFFUSION

INTRODUCTION

A pericardial effusion is a frequent manifestation of severe underlying disease. A heightened sense of clinical awareness is essential to recognize this potentially treatable condition. We review the differential diagnosis, clues to diagnosis, and therapeutic options of this condition.

PATIENT PRESENTATION

A 47-year-old female presented to the emergency department with a 5-day history of increasing dyspnea on exertion, cough, and mild chest discomfort. The patient had a history of hypothyroidism and a symptomatic pericardial effusion required pericardiocentesis in 1994. She had not taken the prescribed thyroid replacement medication.

The patient was admitted to the coronary care unit. Nonspecific T-wave abnormalities were seen on the electrocardiogram. There was moderate cardiomegaly on the anterior-posterior chest x-ray. An echocardiogram showed a large pericardial effusion (Figure 1). The thyroid stimulating hormone was markedly elevated at 162 μ IU/mL (normal: 0.4-3.6 μ IU/mL). The pericardial effusion was felt to be secondary to myxedema. Thyroid replacement therapy was prescribed and she was discharged home after several days in the hospital.

DISCUSSION

Etiology. The differential diagnosis of a pericardial effusion is extensive and includes myxedema, post-myocardial infarction, uremia, cancer, infection, connective

tissue disorders, radiation-induced, trauma, and medications. The patient presented had a large pericardial effusion secondary to myxedema. A pericardial effusion in myxedema is noted in one-third of the patients.¹ Slow lymphatic drainage and increased capillary permeability with protein extravasation is the etiology of the pericardial and pleural effusions, ascites, and edema.² The pericardial effusion seen with myxedema may become quite large. However, they usually do not cause symptoms and regress slowly with thyroid replacement therapy.

The pericardial effusion due to myocardial infarction is seen in approximately 17-25% of patients and is more common in anterior and larger infarcts.³ The reabsorption rate often takes several months.

A pericardial effusion is a common manifestation of uremia. While occasionally seen in association with uremic pericarditis, an asymptomatic effusion is seen in approximately one-half of uremic patients undergoing dialysis and is related to volume overload with resulting congestive heart failure.^{4,5}

The pericardial effusion due to cancer is serosanguineous or hemorrhagic. Although almost any malignant neoplasm may involve the pericardium, lung and breast cancers, leukemia, and lymphomas are the most common etiologies.⁶

Infectious pericarditis may cause a pericardial effusion. Common etiologies include tuberculous, virus, bacteria, and fungus. The incidence of tuberculous pericarditis has decreased within the past three decades due to effective chemotherapy and public health surveillance. However, the emergence of acquired immune deficiency syndrome has led to an increase in the incidence of tuberculous pericarditis and effusion in this patient population.⁷

Pericardial disorders commonly accompany connective

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tissue disorders and present as acute or chronic pericarditis with an effusion. Scleroderma is the most connective tissue disorder with pericardial involvement (about 60% of cases) followed by systemic lupus erythematosus (44%), mixed connective tissue disease (30%), rheumatic arthritis (24%), and polymyositis/dermatomyositis (11%).⁸

Diagnosis - Physical Examination. The diagnosis of a pericardial effusion requires

a heightened degree of clinical suspicion followed by echocardiographic confirmation. Small or moderate effusions may be asymptomatic and are not accompanied by distinctive physical findings. The intrapericardial pressure is frequently elevated in larger effusions and will cause cardiac compression and tamponade. The development of increased intrapericardial pressure seen with a pericardial effusion is related to the absolute volume of the effusion, the rate of fluid accumulation and the physical characteristics of the pericardium itself. With slow fluid accumulation, the pericardium will stretch and the pericardial sac can hold up to two liters without an increase in intrapericardial pressure. However, the unstretched pericardial sac will hold only 80-200 ml of fluid before the intrapericardial pressure rises precipitously with cardiac compression. Large effusions may also compress adjacent structures with associated symptoms of dysphagia from esophageal compression, dyspnea from lung compression, hiccups due to phrenic nerve compression, or hoarseness secondary to recurrent laryngeal nerve compression. The symptoms and signs of cardiac tamponade include pulsus paradoxus, a decline in systemic arterial pressure, elevation of the systemic venous pressure, and a quiet heart on auscultation.

Diagnosis - Laboratory Testing. On chest x-ray, the cardiac silhouette may appear enlarged with a water bottle shape. The electrocardiogram may reveal non-specific findings of a reduction in QRS voltage and flattening of the T wave as fluid accumulates within the pericardial space. Electrical alternans suggest the presence of a massive pericardial effusion and pericardial tamponade. An echocardiogram will accurately

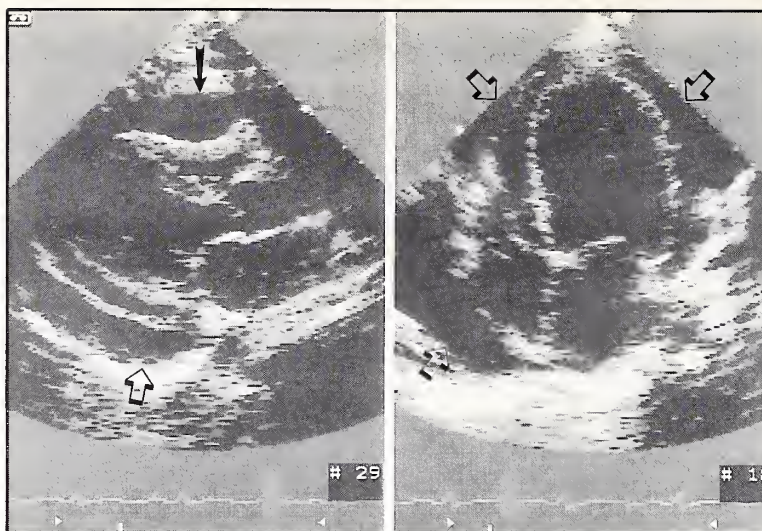


Figure 1: A large pericardial effusion is seen in the parasternal long axis (left) and apical 4-chamber (right) echocardiographic views in a patient with profound hypothyroidism. Arrows outline the pericardial effusion. (Figure courtesy of Nancy Patterson, RN, RCMS).

localize and assess the size of the pericardial effusion. Echocardiography will also show right atrial and ventricular compression before symptomatic pericardial tamponade develops with hemodynamic deterioration.

Management. The management of a pericardial effusion depends on the presence of hemodynamic compromise due to increased intrapericardial pressure and the nature of the underlying disease. Pericardiocentesis is

indicated for symptomatic relief of cardiac compression or diagnosis of a pericardial fluid of uncertain etiology. Pericardiocentesis can be performed safely using echocardiographic or fluoroscopic guidance in the catheterization laboratory.

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State Health Watch

Information provided by the Arkansas Department of Health

Prenatal WIC Participation Related to Medicaid Cost Savings and Infant Health Outcomes

A series of recent studies conducted by Mathematica Policy Research, Inc., has examined the effects of prenatal participation in the WIC Program on several variables. The variables studied included projected Medicaid savings and health indicators such as average birthweight, low and very low birthweight rates and infant mortality.

WIC, the Special Supplemental Nutrition Program for Women, Infants and Children, is intended to improve the health of infants and children by preventing or ameliorating the effects of inadequate or inappropriate nutrition on childbearing women and young children under the age of five years. WIC provides specific foods, nutrition education and referrals to other services including other health providers. Women are encouraged to breastfeed their infants, and staff receive training in breastfeeding promotion and support. WIC eligibility is limited to pregnant, breastfeeding or postpartum women, infants and children with household income at or below 185% of the federal poverty guidelines who have a nutritional need.

The database for these studies was constructed by matching women with Medicaid claims for themselves or their newborns with health records files. These files were then matched to WIC Program files to create two subsets of data: women who had participated in WIC while pregnant and those who had not. Analyses were then performed comparing outcome variables for women who did and did not participate in the WIC Program prior to delivery. Analyses were performed separately for each state because of differences between states in Medicaid income eligibility levels, policies which limited Medicaid payments, percent of births to teenagers, percent of pregnant women receiving late or no prenatal care and other variables frequently associated with negative birth outcomes.¹

States in the studies were: Florida, Minnesota, North Carolina, South Carolina and Texas. All Medicaid covered births in the first six months of 1988 were used for Texas and records for all of 1987 for the other

states. Over 94,000 women and 90,000 newborns were included in the analyses.

Minnesota had the highest income eligibility levels for Medicaid (88% of the federal poverty guidelines) and Texas the lowest at 33% of poverty. South Carolina had the most births to teenagers and Minnesota the lowest. South Carolina had the highest percentage of women below 100% of poverty and Minnesota the smallest percentage. South Carolina had the highest percentage of women receiving late or no prenatal care and Minnesota the lowest percentage. South Carolina had the highest percentage of Medicaid eligible women receiving WIC prenatally and Florida the lowest.¹

The effects of the adequacy of prenatal care was statistically controlled in estimating the effects of prenatal WIC participation on all outcome variables. Those women who participated in WIC prenatally had infants with significantly higher average birthweights and a lower rate of low birthweight (*Table 1*).^{1,3} In all states the effects of WIC participation on average birthweight was positive and was significant except for full term births in Minnesota.¹

The most dramatic WIC effects on birthweight were observed in the differences attributable to WIC participation on the birthweights of preterm infants and the incidence of very low birthweight.^{1,3} Minnesota was the only state in which WIC participation had no effect on the rate of very low birthweight infants.³ For women enrolling in WIC by 30 weeks gestation, the estimated reduction in the percent of live births with very low birthweights was 0.6 percent for Florida, 1.7 percent for North Carolina and 2.1 and 0.9 percent for South Carolina and Texas respectively. When you consider that the percentage of all Medicaid infants with very low birthweight ranged from 1.9 in Minnesota to 2.9 in North Carolina, these reductions are substantial.³

WIC participation was also significantly related to longer gestational age and reduced incidence of preterm

TABLE 1
ESTIMATED EFFECTS OF PRENATAL
WIC PARTICIPATION ON BIRTHWEIGHT

	AVERAGE BIRTHWEIGHT (grams)			INCIDENCE OF LOW BIRTHWEIGHT
	ALL BIRTHS	PRETERM BIRTHS	FULL TERM BIRTHS	
Florida				
With WIC Program	3,225	2,602	3,313	9.5
Without WIC Program	3,152	2,452	3,284	12.8
Estimated Effect of WIC Participation	73*	150*	29*	-3.3*
Minnesota				
With WIC Program	3,312	2,342	3,398	7.8
Without WIC Program	3,261	2,204	3,382	10.0
Estimated Effect of WIC Participation	51*	138*	16	-2.2*
North Carolina				
With WIC Program	3,179	2,669	3,276	11.1
Without WIC Program	3,062	2,430	3,234	16.2
Estimated Effect of WIC Participation	117*	238*	42*	-5.1*
South Carolina				
With WIC Program	3,134	2,602	3,222	11.7
Without WIC Program	3,021	2,343	3,192	16.8
Estimated Effect of WIC Participation	113*	259*	30*	-5.1*
Texas				
With WIC Program	3,231	2,834	3,306	8.8
Without WIC Program	3,154	2,669	3,283	12.2
Estimated Effect of WIC Participation	77*	165*	25*	-3.4*

Devaney, et al: The Savings in Medicaid Costs for Newborns and Their Mothers From Prenatal Participation in the WIC Program, Vol. 1, 1990

* Significance Level = .01

TABLE 2
ESTIMATED EFFECTS OF PRENATAL WIC PARTICIPATION
ON INFANT MORTALITY RATES OF MEDICAID NEWBORNS
(Rate per 1000 Live Births)

	WITHOUT WIC	WITH WIC	DIFFERENCE
Florida	11.9	8.3	3.6*
Minnesota	14.0	12.8	1.2
North Carolina	21.3	12.9	8.4*
South Carolina	36.0	8.8	27.2*
Texas	11.1	7.1	4.0*

DeVane and Schirm, Infant Mortality Among Medicaid Newborns in Five States: The Effects of Prenatal WIC Participation, May, 1993

* Significance Level = .01

TABLE 3
ESTIMATED BENEFIT- FULL CLAIM COST RATIOS FOR MEDICAID REIMBURSEMENTS
ASSOCIATED WITH PRENATAL PARTICIPATION IN THE WIC PROGRAM*

	Estimated Savings in Medicaid Costs	Estimated Prenatal WIC Cost per Participant	Estimated Benefit- Cost Ratios
Florida			
Newborns and Mothers	\$376	\$196	\$1.92
Minnesota			
Newborns and Mothers	\$636	\$151	\$4.21
North Carolina			
Newborns	\$907	\$191	\$4.75
Newborns and Mothers	\$753	\$191	\$3.94
South Carolina			
Newborns and Mothers	\$736	\$232	\$3.17
Texas			
Newborns	\$601	\$202	\$2.98
Newborns and Mothers	\$519	\$202	\$2.57

DeVane, et al, The Savings in Medicaid Costs for Newborns and Their Mothers From Prenatal Participation in the WIC Program, Vol. 1, 1990

* Medicaid reimbursements were for claims for treatment begun in the 1st 60 days of delivery.

births.¹ Since any prenatal participation in WIC was used as the criterion for WIC participation, it was difficult to interpret these outcomes as effects or causes of the relationship.

WIC participation by 30 weeks gestation was related to a reduced incidence of infant mortality in all states except Minnesota (Table 2).⁴ Estimated WIC effects were stronger for neonatal mortality than postneonatal mortality. Prenatal care accounted for significant differences in all states with stronger effects on postneonatal mortality. Self-selection in WIC participation (only 26.6% of Medicaid births had no WIC participation) and lower incomes may help account for the larger WIC effects in South Carolina.⁴

Estimated savings in Medicaid paid claims for newborns and mothers for treatment begun in the first 60 days after delivery were calculated for all states. Savings attributable to WIC prenatal participation independent of the effects of prenatal care ranged from an average of \$376 in Florida to \$753 in North Carolina.² Benefit cost ratios were calculated using data on the cost of providing WIC services provided by each state. For each dollar spent on WIC the estimated savings ranged from \$1.92 in Florida to \$4.21 in Minnesota. It was possible to separate Medicaid claims for newborns from claims for their mothers in North Carolina and Texas. Savings for claims for newborns in these states were greater than when claims for mothers and newborns were combined or could not be separated (Table 3).^{1,2}

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Medicaid Managed Care Providers Required to Coordinate with the WIC Program

Section 1902(a)(11)(C) of the Social Security Act provides for coordination of the Medicaid and Special Supplemental Nutrition Program for Women, Infants and Children. Public Law 103-448 expanded this provision to include Medicaid managed care providers. This coordination should include the referral of potentially eligible women, infants and children to the WIC Program. Potentially eligible recipients include pregnant women, lactating postpartum women up to

six months from the end of pregnancy and children, including infants, less than 5 years old. Medicaid recipients in these categories are income eligible for the WIC Program.

Brochures and flyers to facilitate referrals are available from the state WIC office or your local health unit. Call 661-2473 or fax a request for brochures to 661-2004. The WIC Program informs all applicants in writing of the benefits and availability of Medicaid.

Reported Cases of Selected Reportable Diseases in Arkansas Profile for August 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases August 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	6	91	124	94	187	130
Giardiasis	12	65	65	87	126	150
Shigellosis	6	75	127	104	193	201
Salmonellosis	37	157	206	242	534	402
Hepatitis A	104	377	166	47	253	74
Hepatitis B	8	42	36	66	60	90
HIB	0	3	3	8	6	8
Meningococcal Infections	0	24	39	21	55	27
Viral Meningitis	3	18	52	62	62	79
Lyme Disease	1	7	14	6	15	8
Rocky Mountain Spotted Fever	1	21	16	13	18	17
Tularemia	1	18	20	32	23	36
Measles	0	2	1	0	5	0
Mumps	1	4	5	6	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	521	3258	4954	4691	7078	7590
Syphilis	111	827	932	1127	1324	1612
Legionellosis	0	1	9	5	16	6
Pertussis	4	30	30	13	33	17
Tuberculosis	21	147	181	141	264	209

Arkansas HIV/AIDS Report

1983-1995

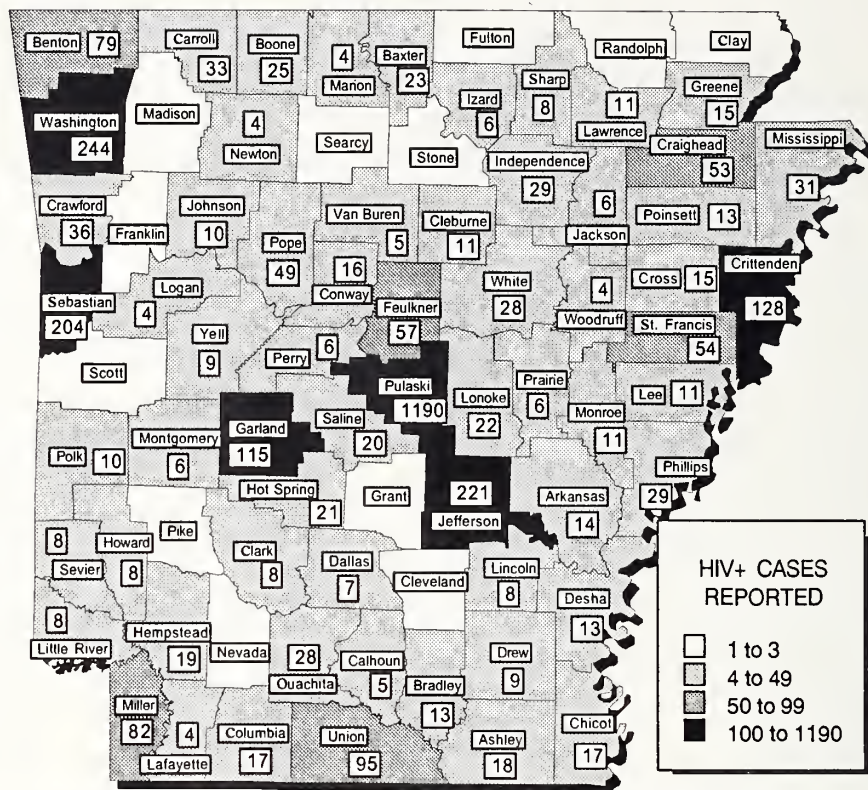
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.



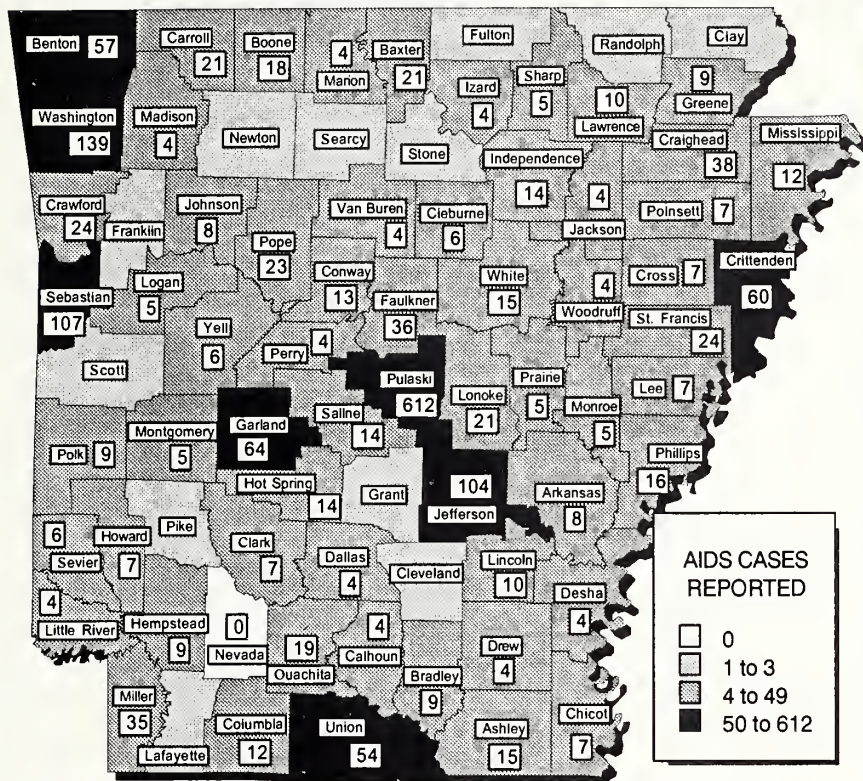
County of residence at the time of test for the 3,326 Arkansans reported to be HIV+. (9/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	269	2,756	83
	Female	8	26	37	68	85	81	94	90	81	570	17
AGE	<5	1	1	2	8	13	6	3	7	2	43	1
	5-12	0	1	1	5	1	2	1	0	1	12	0
	13-19	0	7	8	14	19	25	11	22	12	118	4
	20-29	33	110	123	183	149	156	175	145	103	1,177	35
	30-39	44	86	104	196	208	179	168	171	145	1,301	39
	40-49	22	25	35	56	70	67	65	77	57	474	14
	>49	8	6	11	17	22	38	23	35	30	190	6
RACE	White	87	170	174	328	298	293	278	259	211	2,098	63
	Black	21	69	108	151	184	173	163	183	129	1,181	36
	Other/Unknown	0	2	3	2	3	7	5	15	10	47	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	228	116	1,675	51
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	39	510	16
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	19	230	7
	Heterosexual	5	25	26	59	64	68	100	87	38	472	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	3	43	1
	Undetermined	1	20	35	41	23	12	9	36	134	311	9
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	350	3,326	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995



AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: AIDS statistics are a subset of HIV statistics.

Of the 3,326 Arkansans reported to be HIV+, 1,833 have been diagnosed with AIDS. (9/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	179	1,596	87
	Female	5	6	10	20	25	35	64	42	30	237	13
AGE	<5	0	1	1	6	6	3	2	1	2	22	1
	5-12	0	1	0	1	1	0	1	0	2	6	0
	13-19	0	0	0	4	3	2	4	3	1	17	1
	20-29	31	27	24	55	57	81	110	67	44	496	27
	30-39	39	36	41	78	80	128	178	133	93	806	44
	40-49	15	10	7	35	41	52	78	61	39	338	19
	>49	5	8	7	11	13	19	27	30	28	148	8
RACE	White	74	61	58	141	134	206	275	190	129	1,268	69
	Black	16	20	21	47	66	75	121	102	77	545	30
	Other/Unknown	0	2	1	2	1	4	4	3	3	20	1
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	99	1,092	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	33	268	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	13	147	8
	Heterosexual	5	3	7	11	12	24	52	41	17	172	9
	Transfusion	2	7	3	7	11	3	2	4	2	42	2
	Perinatal	0	1	1	6	6	3	3	1	3	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	6	33	2
	Undetermined	0	2	1	3	1	1	2	9	36	55	3
AIDS CASES BY YEAR		90	83	80	190	201	284	400	295	209	1,833	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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New Members

ARKADELPHIA

Bryan, Yvon F., Anesthesiology. Medical Education, University of Texas Medical School at Houston, 1989. Internship, St. Joseph Hospital, Houston, Texas, 1990. Residency, University of South Florida, Tampa, 1993. Board eligible.

BENTON

Albey, Mark Edward, Family Practice. Medical Education, UAMS, 1992. Internship/Residency, St. Bernard's Regional Medical Center, 1992. Board pending.

CLARKSVILLE

Kriesel, Ben J., Family Practice. Medical Education, UAMS, 1989. Internship/Residency, University of Wyoming Family Practice Program of Cheyenne, 1992. Board certified.

FORT SMITH

Keeter, L. Phil, General and Family Practice. Medical Education, University of Oklahoma, Oklahoma City, 1978. Internship, OU Tulsa Medical College, 1979. Residency, AHEC-Fort Smith, 1980.

HOT SPRINGS

Hunter, Karla Joy, Anesthesiology. Medical Education, University of Oklahoma College of Medicine, Oklahoma City, 1988. Internship, St. Paul Medical Center, 1989. Residency, University of Oklahoma Health Science Center, 1992. Board certified.

HOT SPRINGS VILLAGE

Dykman, Kathryn Donita, Psychiatry. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995.

LITTLE ROCK

Angtuaco, Edward Elmer, Radiology. Medical Education, University of the East, Quezon City, Philippines, 1986. Internship/Residency, UAMS, 1989/1993. Board certified.

Beck, William Arthur, Anesthesiology. Medical Education, UAMS, 1990. Internship, St. Joseph's Medical Center, South Bend, Indiana, 1991. Residency, UAMS, 1995.

Lasner, Jay Elliott, Pain Management/Anesthesiology. Medical Education, Jefferson Medical College, Philadelphia, Pennsylvania, 1981. Internship, Naval Medical Center, San Diego, California, 1982. Residency, Aeron Health Science Center, Anesthesiology, 1994. Board eligible.

Lehmann, Lance Joseph, Pain Management/Anesthesiology. Medical Education, University of Miami School of Medicine, Miami, Florida, 1990. Internship, Yale University, Greenwich, Connecticut, 1991. Residency, University of Miami, 1994. Fellowship, Harvard University, Boston, Massachusetts, 1995. Board eligible.

Primack, Daren S., Cardiovascular Diseases. Medical Education, Albert Einstein College of Medicine, Yeshiva University, 1988. Internship, New England Deaboness Hospital, 1989. Residency, University Hospital, Boston University School of Medicine, 1991. Board certified, Internal Medicine. Board eligible.

Purnell, Gary L., Nuclear Medicine. Medical Education, UAMS, 1982. Internship/Residency, Medical College of Georgia, 1983/1986. Board certified.

Quinn, Brian Dennis, Pathology. Medical Education, The Johns Hopkins University School of Medicine, Baltimore, Maryland, 1986. Internship/Residency, The Johns Hopkins Hospital, Baltimore, Maryland, 1987/1991. Board certified.

Siegel, David Samuel, Hematology/Oncology. Medical Education, New York University, 1986. Internship/Residency, NYU/Bellevue Hospital Center, 1987/1989. Board certified.

RUSSELLVILLE

Hale, Jeffrey Alan, Diagnostic Radiology. Medical Education, UAMS, 1991. Residency, UAMS, 1995. Board certified.

SWIFTON

McGrath, A. Joseph, Jr., Family Medicine. Medical Education, UAMS, 1992. Internship/Residency, AHEC-Jonesboro, 1993/1995.

TEXARKANA

Keever, James E., Orthopedics. Medical Education, University of Kansas, 1969. Internship, University of Kansas, 1970. Residency, University of Texas Health Science Center, San Antonio, 1977. Board certified.

Price, Kevin Scott, Psychiatry. Medical Education, UAMS, 1991. Internship/Residency, Baylor College of Medicine, Houston, Texas, 1992/1995.

WALNUT RIDGE

Troxel, Roger L., Family Medicine. Medical Education, UAMS, 1992. Internship/Residency, AHEC-Jonesboro, 1993/1995. Board pending.

WARREN

Foscue, David John, General Practice. Medical Education, UAMS, 1994. Internship, UAMS, 1995.

RESIDENTS

Adler, Ira N., Radiology. Medical Education, University of Florida College of Medicine, Gainesville, 1995. Residency, UAMS, 1999.

Agronin, Irina Z., Medicine. Medical Education, Kursk State Medical School, Kursk, USSR, 1969. Internship, New Rochelle Hospital, New York, 1992. Residency, UAMS, currently.

Bonwich, Janina B., General Surgery. Medical Education, Temple University Medical School, Philadelphia, 1995. Internship/Residency, UAMS, 2000.

Crafton, Eugene Middleton, Internal Medicine/Gastroenterology. Medical Education, University of Tennessee, Memphis, 1992. Internship/Residency, University of South Alabama, Mobile, 1993, 1995. Fellowship, UAMS, 1997.

Dang, Stuti, Internal Medicine. Medical Education, Maulana Azad Medical College, New Delhi, India, 1990. Internship, St. Mary's Hospital (University of Rochester), New York, 1994. Residency, St. Mary's Hospital, 1995 and UAMS, 1996.

Devabhaktuni, Nalini, Internal Medicine/Transitional Medicine. Medical Education, Osmania Medical College, India, 1986. Internship, Michigan State University, Kalamazoo Center for Medical Studies, 1995. Residency, UAMS, currently.

Farajallah, Awny Samaan Botros, Internal Medicine. Medical Education, Faculty of Medicine, Cairo University, Egypt, 1991. Internship, UAMS, 1996.

Ferguson, Max Ann, General Surgery/Urology. Medical Education, UAMS, 1993. Internship/Residency, UAMS, 1995/1998.

Green, Cheryl Lynn, Radiology. Medical Education, UAMS, 1993. Residency, UAMS, 1997.

Habibipour, Saied, General Surgery. Medical Education, Tehran Medical School, Iran, 1988. Internship, UAMS, 1994. Residency, UAMS, currently.

Hajiamiri, Majid, Neurology. Medical Education, Cerrahpasa Medical School, Turkey, 1991. Internship/Residency, UAMS, 1999.

Guevara, Doyle Patricia, Family Medicine. Medical Education, University Technologica de Pereira, Columbia, 1988. Internship, UAMS, currently.

Hor, Kem (Michelle) Su, Medical Education, UAMS, 1995. Currently in residency.

Johnson, Michael W., Pathology. Medical Education, UAMS, 1994. Residency, UAMS, 2000.

Keenan, Patrick Aloysius, Pathology. Medical Education, University of Kansas, Kansas City, 1995. Residency, UAMS, currently.

Khassawneh, Basheer Yousuf, Internal Medicine. Medical Education, Jordan University of Science and Technology, Irbid, Jordan, 1993. Internship/Residency, UAMS, 1995/1997.

Kosuri, Ramakrishna Raju, Transitional/Physical Medicine & Rehabilitation. Medical Education, Guntur Medical College, India, 1989. Internship/Residency, UAMS, 1995/1998.

McCrory, Kathleen A., Pediatrics. Medical Education, University of North Texas Health Science Center, Fort Worth, 1995. Internship, UAMS, 1996.

Prince, John Robert, Emergency Medicine. Medical Education, UAMS, 1994. Internship/Residency, UAMS, 1997.

Ramanathan, Sundar Raman, Internal Medicine. Medical Education, St. John's Medical College, India, 1993. Internship/Residency, UAMS, 1995/1997.

Rena, Diokson, Pathology. Medical Education, University of Santo Tomas, Manila, Philippines, 1988. Internship, UAMS, currently.

Rodgers, Benjamin Lee, Pediatrics. Medical Education, Medical University of South Carolina, Charleston, 1995. Internship, Arkansas Children's Hospital, currently.

Shen, Xingchu, Orthopedic Surgery/Pathology. Medical Education, Hunan Medical College, P.R. China, 1983. Internship, Hunan Medical College, 1988. Fellowship, UAMS, 1994. Residency, UAMS, currently.

Siddiqui, Sayyadul M., Internal Medicine. Medical Education, Mymensingh Medical School, Bangladesh, 1985. Internship, Mymensingh Medical School, 1986. Residency, UAMS, 1997.

Singh, Baldev, Internal Medicine. Medical Education, Armed Forces Medical College, Pune, India, 1984. Internship/Residency/Fellowship, New Jersey Medical School, 1992/1994/1995. Residency, UAMS, currently.

St. John, Melody D., Internal Medicine/Rheumatology. Medical Education, UAMS, 1990. Internship/Residency/Fellowship, UAMS, 1991/1992/1996.

Williams, Victor Bernard, General Surgery. Medical Education, UAMS, 1995. Residency, UAMS 2000.

Zhou, Tong Gao (Anthony), General Surgery/. Medical Education, Shanghai Second Medical University, P.R. China, 1995. Residency, Shanghai Pu Dong Central Hospital, P.R. China, 1995. Fellowship, University Hospital of Arkansas, currently.

STUDENTS

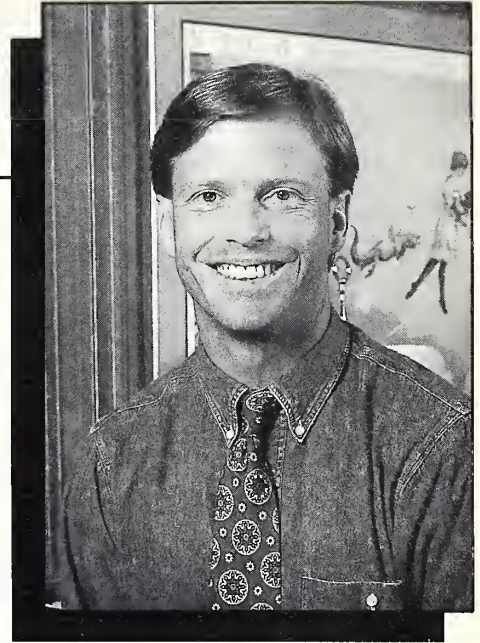
William West Allen
Emily Brooke Arnold
Jason R. Beck
D'Andra D. Bingham
Douglas M. Blackmon
Daniel K. Brown
Bryan H. Clardy
Richard W. Cole
Kara Cooper
Justin Drew Dawson
Robin Pilgram Duffield
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Kevin Thomas Jackson
Victoria Elaine Major
Neesa Jill McCollum
Vanessa Lynn McKinney

Trey Mitchell
David Ortiz
Melanie Ann Parker
Diana Lynn Roe
Eric Brian Russell
Shraddha Shilpa Shrestha
Christine Elise Speer
Dejka M. Steinert
Jason G. Stewart
Phillip John Suffridge
David R. Swindle
James Bradley Tilley
Marisa Alyce Turner
Carolyn E. Vogler
Kimberly Anne Walker
Andrea Wang-Gillam
Richard Alexander White
Mark Allen Woods
James Leonard Workman
Stacy C. Zimmerman



New Member Profile

William D. Bugbee, M.D.



PROFESSIONAL INFORMATION

Specialty: Orthopaedic Surgery

Years in Practice: 1st

Office: Arnold Orthopaedic Associates, Fayetteville

Pre-Medical Education: University of California in
Los Angeles

Medical School & Residency: University of California-San Diego
School of Medicine, La Jolla

Fellowship: Recently finished fellowship in Joint Replacement Surgery at
Anderson Clinic in Arlington, Virginia

Professional organization: American Academy of Orthopaedic Surgery

Honors/Awards: Captain UCLA Soccer Team in 1982; Phi beta kappa

PERSONAL INFORMATION

Wife: Cyndi - married in 1988

Daughter: Brittany - 5 years old

Son: Chase - 2 1/2 years old

Date/Place of Birth: September 24, 1960 in Santa Monica, California

Hobbies: Water sports, outdoor recreation

THOUGHTS

If I had a different job, I'd be: A soccer player

What I most value in life: Are my children

The New Member Profile is making its debut in *The Journal of the Arkansas Medical Society* this month and will appear periodically. In addition to this new feature, *The Journal* will also host a feature for regular members. If you are interested in appearing in either the *New Member Profile* or *Member Profile*, contact Tina Wade at the Arkansas Medical Society at (501) 224-8967 or 1-800-542-1058.



Outdoor MD

Information provided by
the Arkansas Game & Fish Commission

Upcoming deer season expected to be another good one

Favorable conditions and more liberal hunting rules could make the 1995-96 Arkansas deer season the best ever, said Mike Cartwright, deer and elk coordinator for the Arkansas Game and Fish Commission.

Cartwright said major reasons for the anticipated good season are (1) high numbers of deer in many parts of the state, (2) an increase in the number of bonus antlerless permits in several zones and (3) more liberal antlerless hunting in south Arkansas.

Arkansas's archery and crossbow deer hunting opened Oct. 1. Muzzleloader season started Oct. 21, and the modern gun hunting opened Nov. 11.

Cartwright gave a summary of deer prospects by regions. For the Ozarks, he said, "The acorn crop is good to excellent for white oaks and red oaks. Many areas, especially the central Ozarks, should produce good quality bucks due to a fairly mild winter, a good acorn crop in 1994 and a good carryover of antlered bucks in many areas. Most of the Ozark National Forest occurs in this region, so lots of public hunting land is available."

In the Ouachita region, Cartwright said, "Deer density levels vary considerably, and the lower density areas continue to produce some large high quality bucks. Acorns, though, are fair to poor. Hunters should scout areas with openings containing abundant forage like food plots and timber regeneration sites."

The Delta is often feast or famine for deer hunters because of extensive farming acreage. But where deer are found, they are likely to be good ones. Cartwright said, "Hunters hoping to bag a record-book buck have their best chance in this region. Acorn crop is fair to good. Hunters should scout bottomland hardwood areas and cover areas near crop lands." More bonus permits for taking antlerless deer were offered this year for the Delta, so the 1995 harvest should increase a little, he added.

The Gulf Coastal Plain of south Arkansas is Arkansas's top deer producer in numbers with more than half the state's deer taken by hunters. Cartwright said, "Excellent deer hunting will continue in this region for 1995. Much of the land is leased to hunting clubs, and an increasing numbers of clubs are making efforts to improve deer populations. More antlerless harvest and a reduction in the harvest of young antlered bucks by many clubs appear to be working. The results are healthier, heavier and more productive deer populations and an increase in older, larger antlered bucks.

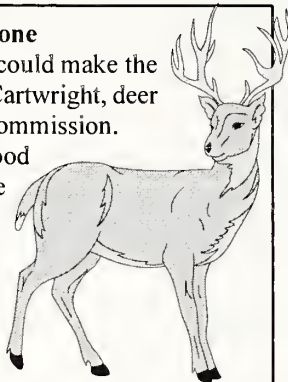
"Acorn production looks fair to good with red oaks slightly better than white oaks. Hunters need to concentrate around cutover timbered areas and near hardwood creek bottoms. The 1995 harvest is expected to increase slightly."

Game & Fish Commission approves 50-day, 5-duck season

This year's duck season will be 50 days, and in 3 segments. Dates are Nov. 24 - Dec. 10, Dec. 16-21 and Dec. 26 - Jan. 21.

An extra 10 days were added to last year's 40-day season, which was an increase from 1993-94's season of 30 days. Duck populations have increased dramatically the past two years, attributed to excellent wetlands conditions in the northern breeding grounds.

The 5-duck bag limit, up from last year's three ducks, includes a maximum of four mallards, only one of which may be a female. Only three mottled ducks, two wood ducks, one black duck, one pintail, one redhead or one canvasback can be taken each day. Shooting hours will again be a half hour before sunrise to sunset.



New gun case law during deer season

Arkansans who carry rifles, shotguns or muzzleloaders in their vehicles need to be aware of the new gun case regulation of the Arkansas Game & Fish Commission. It applies to all public roads in the state only during muzzleloader and modern gun deer season. These dates vary by deer zones but include most of the period from Oct. 21 - Dec. 31.

In an effort to reduce illegal road hunting - shooting at game from roads - the Commission regulation requires cartridge rifles, shotguns or muzzleloaders carried in motor vehicles or "conveyances" to be unloaded and enclosed in a gun case or in a gun rack while the vehicle is on any city, county, state or federal road right-of-way in which wild game is likely to be present.

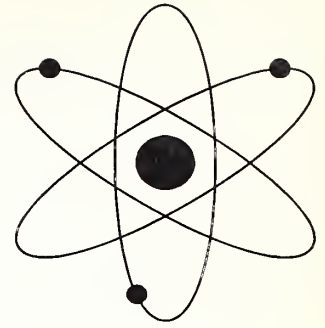
A gun case is defined in the regulation as "a container specifically designed for the purpose of housing a gun which completely encloses such gun by being zipped, snapped, buckled, tied or otherwise fastened with no portion of the gun exposed." Stashing the gun in a plastic garbage bag and closing it with a twist-tie won't do. But a gun sock tied shut will.

Members of the Commission, in drafting the new rule, said illegal road hunting was the number one complaint they have received over the past year. Some persons sit in cars or trucks, lean against them or even sit atop them on rural roads "waiting for a deer to cross." The chances of hitting a deer moving quickly across a road are negligible. But a danger looming is that such a shot may travel down the road to endanger persons in vehicles or nearby houses. In many areas of Arkansas, new residents have bought small acreages in woodlands that are good wildlife habitat. The sparsely settled areas of a few decades ago are now peopled.

Wildlife's top man-killer is a surprise

What animal is the most deadly for humans? Limit the question to the United States. Is it cougars, grizzly bears, rattlesnakes, wasps? Surprise. It's white-tailed deer. According to the National Highway Traffic Safety Administration, there are an average of 130 deer-related fatalities in the nation each year, mostly deer-auto collisions. Far back in second place in animal-caused deaths are bees, with an average of 43 fatalities per year from allergic reactions. Dogs cause an average of 14 deaths per year, rattlesnakes 10 a year and spiders 4 a year. Elephants, goats and jellyfish cause more deaths on the average than do bears, mountain lions, water moccasins or copperheads.

Radiological Case of the Month



Stan L. Kellar, M.D., F.C.C.P.
David L. Harshfield, M.D.
Kelly G. Grigg, B.S.

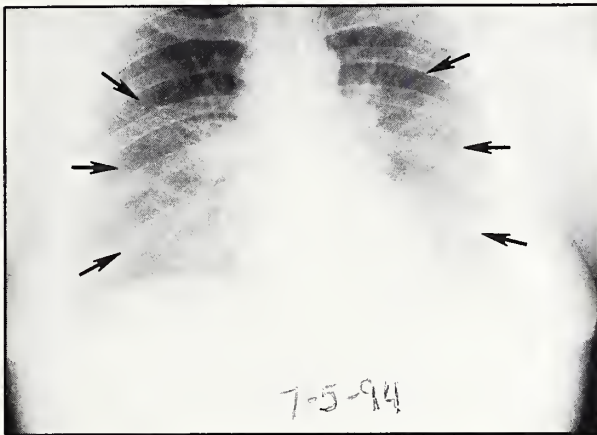


Figure 1

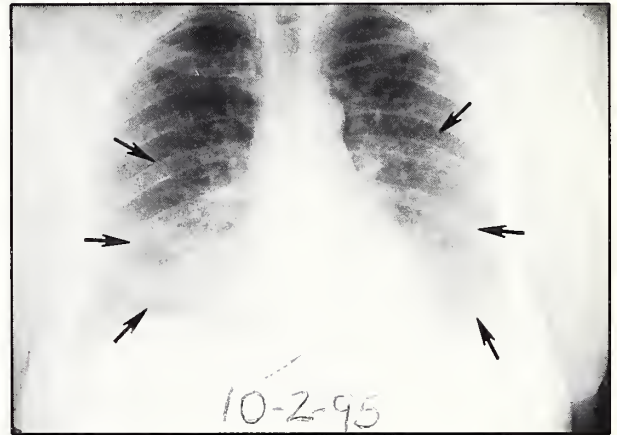


Figure 2

HISTORY:

This 32-year-old female was in good health until approximately 8 days prior to her referral for pulmonary consultation from her home town hospital. She had a "cold" along with a pressure in her sub-sternal region. She had a temperature to approximately 100 degrees at that time and was treated at her local medical facility with an antibiotic. Also, at that time, she had a cough productive of white sputum with a "pinkish tint" and had slight shortness of breath. Her temperature during that hospitalization rose to 102.7.

The patient was referred for pulmonary consultation. Her physical exam revealed a well developed female in no acute distress. She was afebrile on presentation with a respiratory rate of 20 and a heart rate of 80. HEENT exam was unremarkable. Her lungs revealed minimal bilateral crackles without pleural rubs. Her heart had a regular rhythm with a Grade I/VI systolic murmur.

The patient underwent bronchoscopy with washings, brushings, transbronchial biopsies and a protected brush catheter being performed. The transbronchial biopsies showed "mild non-specific chronic inflammation and filling of alveolar spaces with blood and proteinaceous appearing material." Mycology reported possible organism consistent with Blastomycosis.

The patient had slight symptomatic improvement after treatment with broad spectrum antibiotics. Following identification of what was thought to be Blastomycosis, the patient was changed to Sporanox and was treated with 200mg daily for six months. In December of 1994, after six months of anti-fungal therapy, her chest x-ray was unchanged. At that time a very strong recommendation for thoroscopic lung biopsy was made. She consented and a biopsy was performed.

Pulmonary Alveolar Proteinosis

X-RAY FINDINGS:

Figure 1 shows a diffuse density with a parahilar distribution and involvement of the lower lungs (Black arrows). The cardiac silhouette is normal in size.

Figure 2 reveals there has been slight improved aeration in 15 months but a persistent diffuse bilateral parahilar radiating, flocular appearing density (Black arrows). Note: The patient has a normal cardiac silhouette and there was no clinical indication to suggest uremia.

DIAGNOSIS:

Pulmonary alveolar proteinosis.

DISCUSSION:

In the late 1950's when Rosen, Castleman, and Liebow described the first 27 cases of this entity there was a mortality rate of approximately 30%. The entity was named pulmonary alveolar proteinosis based on the histologic appearances which are characterized by an alveolar consolidation of protein-like material with an absence of inflammatory infiltration. The majority of the initial cases were adults ranging in age from 20 to 50 with a male preponderance of 2.5 to 1.0. The predominating symptom was described as progressive dyspnea, insidious in onset, occasionally preceded by one or more febrile illnesses often thought to be pneumonic. It is known that once the illness becomes established, fever is not generally a feature. Other common symptoms include cough (usually productive and occasionally blood stained), fatigue, chest pain, and slight loss of weight.

The x-ray findings are the clue to the diagnosis. The symptoms are usually inappropriate to the gross radiological abnormalities. The radiographs typically demonstrate a fine, soft, diffuse, bilateral, parahilar-radiating, flocular-appearing density. This usually has a "butterfly" or "bat-wing" distribution which is typically associated with pulmonary edema or uremia. The fact that there is absence of cardiomegaly and no evidence of uremia, increases the suspicion for this disease. Also, the absence of hilar adenopathy helps distinguish these radiographic findings from those associated with sarcoidosis. Although the x-ray picture is distinctive, it is certainly not diagnostic and diagnosis can only be firmly established by lung biopsy.

The anoxia seen in this disease is not only a problem of diffusion because of the alveolar spaces being filled with proteinacious material, but also related to shunting on a physiologic rather than anatomic basis. The pathophysiology in this disease appears to be a result of the alveoli either being completely or partially filled by granular and follicular proteinacious material. Complete filling in of large areas results in areas of venous admixture and physiologic shunting. Incomplete filling of the alveolus results in interference of diffusion of the alveolar-capillary block type, in which alteration in the biophysical properties of the septal cells themselves may play a role.

REFERENCES:

1. Ramires-R, Jose; Nyka, Walenty; McLaughlin, Joseph. Pulmonary Alveolar Proteinosis. The New England Journal of Medicine 1963; volume 268, number 4.
2. Fraimow, William; Cathcart, Richard T.; Taylor, Richard C. Physiologic and Clinical Aspects of Pulmonary Alveolar Proteinosis. Annals of Internal Medicine 1960; volume 5, number 6.
3. Rosen, Samuel; Castleman, Benjamin; Liebow, Averill A. Pulmonary Alveolar Proteinosis. The New England Journal of Medicine 1958; volume 258, number 23.

Author: Stan L. Kellar, M.D., F.C.C.P., is a Pulmonary Consultant with the Pulmonary Clinic in North Little Rock.

Editor: David L. Harshfield, M.D., is Director of Radiology at Riverside Radiology Group in North Little Rock & Clinical Associate Professor of Radiology at UAMS.

Contributor: Kelly Grigg, B.S., is a premedical student research assistant at UAMS.

Special thanks to Tom Dawson of Skipworth, Inc. in Little Rock for the reproduction of chest films.

AMS Newsmakers

Dr. David H. Roberts, of Mountain Home, and **Drs. Edgardo J. C. Angtuaco** and **Teresita L. Angtuaco**, both of Little Rock, have been named fellows of the American College of Radiology. Selected for their outstanding contributions to the field, they were 3 of 130 named fellows by the College's Board of Chancellors.

Dr. George Micheal Finley has been named director of AHEC-Southwest where since 1988 he has directed the development of the Family Practice Residency Program.

Dr. David Jacks, a urologist at the South Arkansas Urology Clinic in Pine Bluff, has been elected head of the Arkansas Urological Society where he has been a member since 1981.

Dr. John Lumb, a general surgeon at Hot Spring County Memorial Hospital, recently attended a seminar on a new laproscopic surgery technique. The technique uses carbon dioxide to expand the abdominal wall away from the intestines and allow the surgeon to remove the gall bladder or perform procedures on the stomach or hernias.

Dr. Sandra Nichols, Arkansas Department of Health Director, was the special guest speaker recently at the Jacksonville Business and Professional Women's meeting. She discussed family planning and women's health issues.

Dr. Hampton Roy, a Little Rock eye surgeon, recently returned from Lima, Peru and La Paz, Bolivia where he was a guest speaker at the national meetings of ophthalmology societies in those countries. He spoke about some of the latest innovations in eye surgery including clear cornea and no-stitch cataract surgery, topical anesthesia in cataract surgery and use of the excimer laser in refractive surgery.

Dr. James Y. Suen, professor and chairman of the department of otolaryngology, head and neck surgery at UAMS, recently received the "Distinguished Alumnus Award" from the M.D. Anderson Cancer Center in Houston. Graduates of the center's fellowship and residency programs selected Suen for making significant contributions in his field.

Dr. Sloan Wilson of Little Rock received the Senior Honor Award by the American Academy of Ophthalmology at its annual meeting in Atlanta earlier this month. He is the first Arkansan to receive this award.

Dr. George F. Wynne a family practitioner of Warren has recently retired.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of August are:

Michael Steven Bouton	Fort Smith
John Timothy Dow	Jonesboro
Edwin Carroll Jones	Springdale
Robert Leigh Kale	Fort Smith
Horace N. Marvin	Little Rock
Kenneth Eugene Murphy	Conway
Gregory Wayne Neaville	Batesville
Robert Edward Powers	Little Rock
David Lawrence Reding	Little Rock
Harold Patrick Stern	Little Rock
Elizabeth Callejo Tolosa	El Dorado
Alonzo Dean Williams	Little Rock

Resolution

Vida H. Gordon, M.D.

WHEREAS, the membership of the Pulaski County Medical Society is saddened to learn of the death of an esteemed colleague, Vida H. Gordon, M.D.; and

WHEREAS, she had demonstrated her devotion to her profession by serving as a loyal member of this Society for over forty-eight years; and

WHEREAS, Dr. Gordon had earned the respect of her colleagues for her pioneering contributions to the medical community as Arkansas' first Board Certified Pediatric Allergist; and

WHEREAS, she had won the love and admiration of her patients through her thoughtful and considerate manner;
BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the archives of the Society; and

THAT, a copy of this resolution be sent to Dr. Gordon's family as a token of our heart-felt sympathy; and

THAT, a copy of this resolution be forwarded to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

Board of Directors

August 17, 1995

By Order of the Memorials Committee

Samuel B. Welch, M.D., Chairman

Bruce E. Schratz, M.D.

James W. Headstream, M.D.

Health Care Access Foundation

As of October 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 9,889 medically indigent persons, received 18,448 applications and enrolled 36,893 persons. This program has 1,685 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

How Much Patient Care Might Be Eliminated?

The march of managed care, new technologies, and alternative settings will prompt a 34% decrease in inpatient hospital days over the five years from 1994 to 1999, according to a new analysis by the Sachs Group. In the same period, discharges could decline by 26%, from 32.5 million to 24.2 million, the Sachs study suggests, while average length of stay could drop 11% from 6.1 to 5.5 days. The study also projected patterns for specific types of care:

- * Ambulatory facilities will eliminate many surgical inpatient days, with orthopedics dropping 38% to 10.5 million and general surgery down 15% to 13.9 million days.

- * Use of birthing centers will increase, and many new mothers and healthy newborns will be in hospitals for stays averaging 12 hours that won't count as discharges. Thus, OB discharges will decline 30% from 3.9 million to 2.7 million, while length of stay will drop from 2.6 to 2.1 days.

- * Although there will be an 11% increase in HIV patient discharges from 121,000 to 134,000, length of stay will decline 25% from 12.2 to 9.2 days as use of hospices expands.

- * Mental health care will be delivered more often in residential settings such as halfway houses, eliminating nearly a million psychiatric discharges for a decline of 59% and new total of 712,000. This is the biggest projected decline, in both percent and absolute numbers, for any type of care.

Facts Sheets by FAX

Brief but comprehensive information on commonly asked office laboratory questions and the CLIA '88 regulations is now immediately available free of charge via same-day FAX to physicians and their staffs through the Commission on Office Laboratory Accreditation (COLA). Thirty-three CLIA Fact Sheets condense information from a variety of voluminous sources, such as the Federal Register and laboratory manuals, into a user-friendly, one- and two-page format. This service, made possible through a cooperative agreement with

the Centers for Disease Control and prevention (CDC), is available by calling COLA Customer Service toll-free at (800) 298-8044. The complete list of fact sheets includes:

1. *How to Register Your Laboratory for CLIA Purposes*
2. *How to Find Out More About Your Laboratory's State Licensure Law*
3. *Seeking Accreditation from a HCFA-Approved Accreditation Program*
4. *How to Properly Register Your Shared Laboratory with HCFA*
5. *How to Get a copy of the CLIA Regulations*
6. *Requirements for Provider-Performed Microscopy Procedures*
7. *How to Change Your CLIA Certificate*
8. *Notification Requirements and Other Responsibilities to HCFA*
9. *Writing a Procedure Manual*
10. *Proficiency Testing Information*
11. *What Every Laboratory Should Know About Documentation*
12. *Quality Control for Moderate Complexity Testing*
13. *Quality Control for High Complexity Testing*
14. *Remedial Actions*
15. *Quality Control for Microbiology*
16. *Quality Control for Hematology and Immunohematology*
17. *Quality Control for Immunology*
18. *Quality Control for Mycobacteriology, Mycology, and Virology*
19. *Quality Control Requirements for Blood Gas Analysis and Drug Test Screening*
20. *A possible Way to Manage Quantitative Quality Control Results*
21. *Calibration and Calibration Verification Procedures*
22. *Safety Standards*
23. *OSHA Standards for Bloodborne Pathogens*
24. *Meeting the Personnel Standards for Moderate Complexity Testing*
25. *Meeting the Personnel Standards for High Complexity Testing*
26. *Grandfathered Laboratory Directors*
27. *Responsibilities of the Directors*
28. *Grandfather Provisions for the General Supervisor*
29. *New Pathways to Qualify as the General Supervisor and Testing Personnel for High Complexity Testing*
30. *Quality Assurance in the Laboratory*
31. *What to Expect During Your CLIA Inspection*
32. *How to Respond After Your On-site Survey*
33. *CLIA Sanctions and Procedures for Appeal*

Clinical Alert from the National Heart, Lung, & Blood Institute, National Institutes of Health Bypass Over Angioplasty for Patients with Diabetes

The National Heart, Lung, and Blood Institute (NHLBI), part of the National Institutes of Health, recently

announced that, as a first revascularization procedure, coronary artery bypass graft (CABG) surgery has been shown to have a markedly lower 5-year death rate than angioplasty for persons with diabetes mellitus (Type I or II) who are on oral hypoglycemic agents or insulin.

The finding came from the NHLBI-funded Bypass Angioplasty Revascularization Investigation (BARI). The multicenter, international, randomized trial studied patients who needed a first revascularization because of severe ischemia with obstructions in two or more major coronary arteries. Over 5 years, patients with diabetes mellitus who were on drug therapy had a significantly lower ($p=0.002$) mortality rate with CABG, compared with percutaneous transluminal coronary angioplasty (PTCA). The 5-year CABG mortality rate was 19 percent, compared with 35 percent for PTCA. By contrast, in patients without diabetes and in those with diabetes but not on drug treatment, the 5-year mortality rates for CABG and PTCA were both about 9 percent.

The higher death rate for PTCA was not due to complications of the procedure itself. Those with diabetes are known to have an excessive cardiovascular risk and a higher mortality rate was expected for them, regardless of revascularization procedure. However, the excess mortality with PTCA had not been anticipated.

BARI's results indicate that CABG should be the preferred treatment for patients with diabetes on drug or insulin therapy who have multivessel coronary artery disease and need a first coronary revascularization. These results have a significant impact on the clinical care of these patients.

Coronary revascularization plays an important role in the treatment of clinically severe coronary artery disease. The two most commonly used methods of revascularization are CABG and PTCA. PTCA is a catheter-based nonsurgical approach that directly targets coronary obstructions by dilation of the vessel at the point of obstruction. The process is accompanied by local vascular injury and subsequent healing. The extent of injury and the healing process may be different in diabetic and nondiabetic patients. Not all lesions can be dilated, due largely to technical reasons. CABG is a major operation, requiring opening of the chest. It provides a new channel, with a lumen frequently larger than the native, diseased lumen. There is no instrumentation of the local lesion and, therefore, no related vascular injury. While both treatments alleviate the effects of coronary artery disease, they do not correct or alter the natural course of the disease.

Before PTCA, CABG was the traditional revascularization strategy. But PTCA, first performed in the United States in 1977, has grown rapidly in use. In 1993, about 362,000 PTCAs were done in the United States, compared with about 309,000 CABG surgeries.

However, PTCA use has expanded not just in

number but also in the type of patient treated. Initially, PTCA was done on patients with one obstructed vessel. But, with increased physician expertise and an improved technology, PTCA use has rapidly expanded to include patients with more complex, multivessel coronary obstructions, once treated exclusively with CABG. This has led to uncertainties about the long-term effectiveness and safety of PTCA compared with CABG and prompted the NHLBI to fund a rigorous evaluation of the two methods.

That rigorous investigation—the BARI study—tests whether the use of PTCA as an initial treatment compromised the clinical outcome for patients with multivessel coronary artery disease who needed revascularization and could be treated by either PTCA or CABG. BARI did not test outcomes for repeat procedures. It also studied only PTCAs performed with the standard balloon technique.

The trial is the largest randomized study of its type, with enough patients to be able to address key endpoints, both overall and in predetermined patient subgroups. The subgroups were based on patients' anginal status, number of diseased vessels, and left ventricular function. Also studied are various demographic factors such as gender, age, race, and the presence of diabetes.

The primary endpoint is mortality after 5 years of follow-up. Other important endpoints include the occurrence of a myocardial infarction, need of repeat revascularization procedures, angina, functional status, quality of life, and utilization of health-care resources. (Both quality of life and utilization of health-care resources are studied in detail in a separately funded ancillary study.)

Patients were eligible for the trial if they had coronary artery disease with a 50 percent or more luminal obstruction (as measured by calipers) in at least two of the coronary vessels supplying two or three major coronary territories. They also had to have clinically severe ischemia but not a prior revascularization. Patients were ineligible for the trial if they had, for example, insufficient angina or ischemia, required emergency revascularization, left main stenosis of 50 percent or greater, a noncardiac illness expected to result in limited survival, primary coronary spasm, or a poor quality angiogram. Baseline angiograms were reviewed and classified by the Central Radiographic Laboratory (Dr. Edwin L. Alderman, director) at the Stanford University Medical Center in Palo Alto, CA.

Between August 1988 and August 1991, 18 clinical centers randomized 1,829 patients, ages 17 to 80 and including 353 on drug treatment for diabetes. Half of the patients were randomly assigned to PTCA and the other half to CABG. At baseline, the mean age of the randomized patients was 61 years. Thirty-nine percent of the randomized patients were age 65 or older,

27 percent were women, 25 percent were classified as having diabetes (of these, 76 percent were being treated with oral hypoglycemic agents or insulin), 60 percent had two-vessel disease and 40 percent had three-vessel disease, and 98 percent had angina (of these, 64 percent had unstable angina and 17 percent had class 3-4 angina). At the time of this alert, 66 percent of patients had completed follow-up. Patients will be followed for a minimum of 7 years. The trial is expected to finish follow-up on all patients by November 1998.

Follow-up includes annual functional status assessments and an electrocardiogram (ECG), and a biennial exercise stress test. As required by the protocol, risk factor modification was initiated for all patients after their enrollment. This includes help with smoking cessation, exercise, and diet. Patients also were treated as needed for hypertension, elevated blood cholesterol, and diabetes. Risk factors and medical problems were managed by each patient's primary care physician.

The trial has been closely monitored by both the study chairman (Dr. Robert Frye, Mayo Clinic Foundation), the Clinical Coordinating Center (Dr. Katherine Detre, University of Pittsburgh), and the independent Data and Safety Monitoring Board (chaired by Dr. J. David Bristow, Oregon Health Sciences University). The Data and Safety Monitoring Board is composed of PTCA experts, cardiovascular surgeons, clinical cardiologists, and experts in biostatistics and ethics. The Board regularly reviews the monitoring reports. ECG analyses are being done by the Central ECG Laboratory (Dr. Bernard R. Chaitman, director) at the St. Louis University Medical Center. An independent Mortality and Morbidity Classification Committee (chaired by Dr. Ronald Prineas, University of Miami) categorizes fatal events in the trial.

On September 13, 1995, the Data and Safety Monitoring Board held an urgent session to review the 5-year mortality data. The Board concluded that the unfavorable mortality results for the patients on drug treatment for diabetes and first treated with PTCA were unlikely to be due to chance. The Board recommended to the National Institutes of Health that physicians and other health care professionals and the public be promptly informed of the results.

In summary: BARI's findings should not be applied to all persons with diabetes. They apply only to those on oral hypoglycemic agents or insulin for diabetes and who have multivessel coronary artery disease and are undergoing an initial revascularization procedure. The data offer the following guidelines for such patients: They will probably fare better with CABG than PTCA as an initial treatment. For patients who have already had a PTCA and are asymptomatic—

experiencing no ischemia, angina, or other symptom—they should take no special action but continue their regular care. Alternatively, if they have already had a PTCA and had their ischemia return (e.g., reappearance of angina), they should consult their physicians to assess their current health status and review optimal strategies for further care. Close physician monitoring is particularly important for patients with diabetes who have coronary artery disease, since they may not experience symptoms during periods of ischemia.

Finally, all patients who have evidence of coronary artery disease, with or without a prior PTCA or CABG, should receive an aggressive approach to medical management of known risk factors for coronary artery disease, including smoking cessation for smokers, appropriate control of elevated blood pressure or serum cholesterol, and optimal control of diabetes.

Estrogen/Androgen Combination Provides Enhanced Symptom Relief in Older Menopausal Women

A recent study concluded that the use of an estrogen/androgen combination may provide enhanced symptom relief in older postmenopausal women. The results were presented by Angela Bowen, MD of The Middleton Foundation, Olympia, WA, at the 1995 North American Menopause Society meeting.

Ordinarily, symptoms associated with a reduction in estrogen levels begin in perimenopause and increase throughout early menopause. Symptoms may decrease with increasing age; however, older women still experience some symptoms and may thrive with the added benefit of an estrogen or estrogen/androgen replacement therapy. This study compared oral esterified estrogens with and without low-dose oral androgen (Estratab® v. Estratest®) in 25 women who were postmenopausal for 5 to 22 years. Approximately half the patients were over 60 years of age.

Both treatments significantly relieved physical symptoms of hot flashes, sweating and vaginal dryness, but only estrogen combined with androgen significantly relieved psychosomatic symptoms of fatigue, insomnia and palpitations. Psychologic symptoms including irritability, nervousness, depression, anxiety and lack of concentration also decreased with the use of an estrogen/androgen combination but not with estrogen alone.

Three weeks after patients stopped taking hormone therapy, symptom relief in the estrogen/androgen group persisted, but symptoms reappeared in the estrogen only group. The addition of low-dose oral androgen to oral estrogen did not reduce the effectiveness of estrogen and may provide enhanced symptom relief in older women.

VISA Health Care Volume Grows at Record Rates by Mid-Year 1995

Visa card payment volume in the health care industry grew to a record \$3.2 billion during the first two quarters of 1995, a 38 percent increase over the same period in 1994.

With \$582 million in transactions during June alone, Visa's annual health care volume is expected to reach \$6.8 billion for 1995, according to statistics released in August. Visa card payment volume grew by 35 percent in physicians' offices, by 28 percent in hospitals and 41 percent in dental facilities, as compared with the first six months of 1994.

"Visa's phenomenal rate of growth in health care is directly related to the proliferation of managed care plans that have increased consumers' out-of-pocket expenses," said Les Mann, senior vice president of Health Care Marketing at Visa. He said the bankcard is a convenient means of managing the consumers' increased responsibility for co-payments and deductibles.

The Visa card is accepted today at 210,000 health care locations nationwide, including 95 percent of hospitals, 80 percent of dental facilities and 51 percent of physicians' offices.

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation usually must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, it is suggested that this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the requirements listed in the disciplinary action document.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

As of September 13, 1995

Wanda Denese Tate, LPN 22768 (El Dorado/Norphlet) - REVOKED
Julie Anna McCaghren, LPN 27573 (Key West, FL) - Renewal Denied Indefinitely
Thomas Lee Ervin, RN 37092 (Coeur d'Alene, ID/San Leandro, CA) - Suspended Indefinitely
Laura Jean Hesson Helton, RN 13290/CRNA C-311 (Ft. Smith) - Suspended 5 years
Susan Jayne Morgan Bohannon, RN 40450 (Eureka Springs) - REVOKED
Deborah Fay Tyler, LPN 17094 (Little Rock) - Consent Agreement Suspended 1 year

As of October 11, 1995

Jimmy Lee Beard, RN 48579 (Ft. Smith) - REVOKED
Ava Nell Watson, LPN 17840 (Hornersville, MO) - License not renewable
Amanda Nikita Rochelle Gilliam, RN 43730 (Texarkana, TX) - Probation 3 months
John Samuel Brooks, RN 16521 (El Dorado) - Suspension 5 years
Barry Russell West, Jr., RN 39866 (Fayetteville) - Probation 5 years

As of October 12, 1995

Ginger Gail Wilson Jones, LPN 32838 (Williford) - REVOKED
Connie Sue Ray Roy, LPN 30759 (Ft. Smith) - Suspension 2 years
Audrey Mae Todd Orsby, LPN 20682 (Cherry Valley) - Probation extended additional 6 months
Carol Rene Taylor Wimsett, RN 41425 (Hot Springs) - Suspension 2 years
Mary Sue Sipes, LPN 11992 (Crossett) - Suspension 1 year civil penalty

ALERT

If you have employed one of the following nurses or have any knowledge of their whereabouts, please notify the Board of Nursing at (501)686-2700:

Betty Jean Groden - (Gardner), LPN #16020

Frances Prater Sherwani, LPN #31073

Ava Nell Watson, LPN #17840 (Does not have a valid Arkansas license)

Things To Come

December 7 - 9

Improving Rural Health Care Through Community Development. Hyatt Regency Savannah Hotel, Savannah, Georgia. Sponsored by the National Rural Health Association. Co-sponsored by the American Academy of Family Physicians and the American Hospital Association. Registration deadline is November 30, 1995. For more information, write to National Rural Health Association, One West Armour Boulevard, Suite 301, Kansas City, Missouri, 64111.

December 9

Cardiology Seminar. The Ritz-Carlton Hotel, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call (800) 325-9862.

December 15 - 18

Ethical Issues in the Care of Terminally Ill and Dying Patients. The Rolling Hills Hotel & Golf Resort, Ft. Lauderdale, FL. Sponsored by the CEREC Center of Southeast Florida. For more information, call (305) 424-9304.

January 12 - 13, 1996

What's New In General Surgery - 18th Annual Postgraduate Course. Hyatt Regency, Sacramento, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

January 26 - 28, 1996

The 15th Annual Perspectives on New Diagnostic & Therapeutic Techniques in Clinical Cardiology. Lake Buena Vista, Florida. Sponsored by the American College of Cardiology. For more information, call 800-257-4739.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

February 9 - 10, 1996

(Mardi Gras Season)

Neuropsychiatric Aspects of Primary Care: Anxiety and Depression - Across the Life Cycle. Royal Sonesta Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center, Office of Continuing Medical Education. For more information, call (504) 588-5466 or 1-800-588-5300.

February 10-13, 1996

Fifty-first Annual Postgraduate OB/GYN Assembly. Beverly Hilton Hotel, Beverly Hills, California. Sponsored by the OB/GYN Assembly of Southern California. For more information, call (213) 937-5514.

February 17-19, 1996

Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Office of Continuing Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 19 - 23, 1996

"New Technological Applications in Imaging & Intervention." Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Louisiana State University School of Medicine and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

April 26 - May 3, 1996

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

June 6 - 9, 1996

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

December 5, 1995

5th Annual Women in Medicine and Research Day

Sponsored by UAMS College of Medicine

Location: Arkansas Children's Hospital, Brandon Conference Center

7:30 a.m. Registration and Continental Breakfast

4 Category I credit hours

\$5 UAMS faculty \$10 Non-UAMS

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

EKG Conference, Mondays, noon, VAMC, room 5C114

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Behavioral Sciences Conference, 1st & 4th Friday, 12:30 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:30 p.m., Warner Brown Hospital
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:30 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:30 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, AHEC - South Arkansas. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Pediatric Conference, 3rd Friday, 12:30 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:30 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:30 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:30 p.m., AHEC - South Arkansas

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Fridays, 12:00 noon, Washington Regional Medical Center
AHEC Teaching Conferences, Thursdays, 7:30 a.m., Washington Regional Medical Center
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center

Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

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Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
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Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
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Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
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Volume 92 Number 7

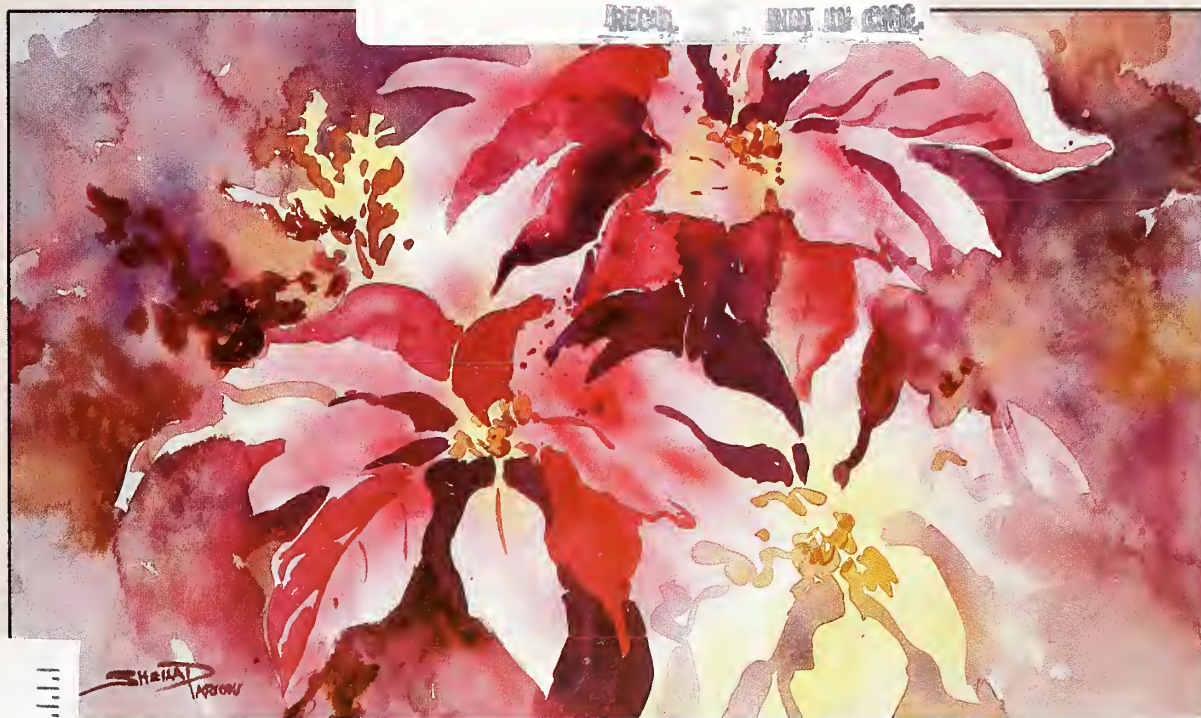
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HAPPY HOLIDAYS

One Doctor's *Field of Dreams*.....page 334

Managed Care - *Are We Ready for the Changes?*.....page 324

1995 AMS Membership Roster.....page 363

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Volume 92 Number 7

December 1995

CONTENTS

FEATURES

- 324 **Managed Care - Are We Ready for the Changes?**
Editorial
Jerry Byrum, M.D.
- 329 **Overview of Newborn Screening in Arkansas**
Special Article
Robert West, M.D.
Cheryl Hale, R.N.C.
- 334 **One Doctor's Field of Dreams**
Special Article
Bill Scurlock, M.D.
- 336 **William E. Golden, M.D. Elected President of ASIM**
- 339 **Physician Members of Arkansas Legislature Meet with Arkansas Congressional Delegation**
- 363 **1995 AMS Membership Roster**

Coming up in the January issue:

New Member Profile featuring Dr. David S. Siegel, a hematologist/
oncologist in Little Rock

Scientific Article: Gastroesophageal Reflux in Children

Medicine in the News: Exposure to Hepatitis C among Health Care Workers

Plus much more...

DEPARTMENTS

- 341 **Cardiology Commentary & Update**
- 345 **State Health Watch**
- 348 **Arkansas HIV/AIDS Report**
- 351 **New Members**
- 353 **Radiological Case of the Month**
- 357 **AMS Newsmakers**
- 357 **Medicine in the News**
- 357 **In Memoriam**
- 358 **Things to Come**
- 359 **Keeping Up**

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Managed Care

Are We Ready for the Changes?

Jerry Byrum, M.D.*

As 1995 comes to a close, it is a good time to reflect on the changes that we have seen in Arkansas medicine this year. I think we shall never be the same.

For me, seeing the changes that were coming began in January. It was time for that once a year chore that each of us must go through for our respective hospitals - the annual meeting - when hospital administration gives us their version of the "state of the union." In the past I have generally not been too interested in such events. Usually I fill the time with visions of snow skiing or some other fun activity. In fact, most of these meetings have had a low frequency "buzz" as physicians use the time to quietly chat with each other during the proceedings. This year was to be different.

The speaker began by asking us for three minutes of attention. If we would give him our undivided attention for three minutes, and then we weren't interested in what he had to say, we could go back to our conversations. That sounded fair. So he began, "There has been a paradigm shift in medicine." There are certain words that just don't carry much impact. The word "paradigm" is one of these. It's a word you might expect to see in a paper on quantum mechanics, but not pertaining to the practice of medicine.

the next few minutes he gave us a first hand vocabulary lesson on how the word "paradigm" might impact an economic system, in this case, the watch-making industry. He said, "In 1960 the Swiss made 85% of the world's watches. They were excellent at what they did. The technology and manufacturing ability of the Swiss in building watches at that time was the best in the world. Factories were geared up for maximum production. People were employed and made money. All was well.

"Then a group of Swiss watch-making researchers made a fascinating discovery. Cheap quartz crystals could be caused to vibrate in a typical way when a small electrical current was passed through them and this could be calibrated to keep time. This amazing discovery was presented at an international watch-making convention in the early sixties. The establishment of the Swiss watch-making industry found these findings 'interesting,' but because of the huge cost involved in retooling to take advantage of this unproved technology, the large Swiss companies rejected it.

"There was also another company at this convention in the early sixties. It was then a small unknown company named Seiko. The rest we know. Seiko and other companies used the new technology to make high quality watches at a fraction of the cost of the old system. The Swiss lost the vast ma-

jority of their market share to new, cheaper technology. You see, it is possible to have a new development in an economic system (or any model for that matter) which is so radical that it changes all the rules for that model. The old financial structure which worked in the past may not work anymore. Things

Even though governmental health care reform is dead, market-driven changes are definitely revolutionizing how we practice. Here in Arkansas the changes of pre-paid managed care which have already swept the nation are just now beginning to really be felt.

The room became quiet, eerily quiet. "Let me tell you about an example of a 'paradigm shift' which occurred in the watch-making business," he said. Over

* Jerry Byrum, M.D., is a Pediatrician with the All For Kids Pediatric Clinic in Little Rock. He is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

that were profitable in the past may not be profitable in the new system. The rules have changed."

So the vocabulary lesson was over. I understood what he was saying. It is possible for one seemingly insignificant factor to revolutionize an economic system.

"Ladies and gentlemen, there has been a 'paradigm shift' in medicine," he went on to say. The speaker then explained his version of what this paradigm shift was. Now let me ask you, what is he talking about? What are we facing that is so revolutionary that all the rules have changed? The answer is: pre-paid managed health care.

Even though governmental health care reform is dead, market-driven changes are definitely revolutionizing how we practice. Here in Arkansas the changes of pre-paid managed care which have already swept the nation are just now beginning to really be felt. How does pre-paid managed care prove to be such a radical difference? Let's look at it.

Under the old fee for service system, physicians, pharmacists, hospitals and other medical providers are paid on the basis of what services are provided. This means that full waiting rooms, full operating rooms, occupied hospital beds and facilities, and utilization of pharmacy services mean secure income streams. Utilization means financial reward.

Under the new system however, enrollment, capitation rates and low utilization mean financial reward. These systems are so different that it behooves us to thoroughly understand them.

The first question to ask is, why is market-driven health care reform occurring? There are probably at least four reasons. The first is money. While most Americans want to spare no expense for their individual health care, there is a belief that too much money is spent on health care in our country. This is particularly true in the business sector where there is constant pressure to reduce health care costs. The second reason is almost as important as the first. There are increased numbers of physicians and medical facilities in our country which have led to price competition. Particularly in large metropolitan areas, these two factors have led to the growth of "managed care." In addition to cost and price competition, two other factors play a part. These are problems of access to health care and fragmentation of care (patients being treated by multiple physicians for various problems). In summary, for the above reasons, pre-paid managed health care has emerged as a way to provide high-quality, cost-effective medicine.

How does "managed care" control costs while at the same time providing high-quality care? First of all, for the first time, access to a primary care physician is easy both for the patient and the physician. One local HMO advertises that the only paperwork needed for a physician's visit is a ten dollar bill. Along with access to care, the patient's health is actually managed by the primary care physician. This man-

Because of competition, physicians find themselves being forced to find cheaper ways of providing care, while at the same time maintaining quality. This has led to changes in physician practice patterns.

agement includes managing access to specialists, tests and treatment (a must for cost-effective care) and managing the patient's health (a much harder thing to do). Minor illnesses are managed by primary care physicians instead of specialists with cost savings. Because of this trend, along with increased numbers of specialist physicians, competition and decreased demand lower specialist physicians salaries.

Because of competition, physicians find themselves being forced to find cheaper ways of providing care,



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while at the same time maintaining quality. This has led to changes in physician practice patterns. Guidelines for care are developed and instituted. For the first time, preventative care is financially feasible. This leads to decreased hospital utilization and lower costs.

Because access is not a problem, expensive emergency room visits are avoided. Fragmentation of care is resolved. Duplication of tests are avoided.

As can be seen from the above, managed care lowers costs. Because of increased numbers of physicians, competition forces physicians to participate or lose their patient base (market share). Large companies make managed care plans their only health insurance available to their employees.

In addition to the problem of changed practice patterns, physicians also face other problems with managed care. Contracts with managed care companies have to be individually evaluated and executed. Because of the logistics in securing physicians on a managed care plan, companies desire to enter into agreements with groups of doctors. This favors the formation of physician groups.

Because of these complexities, it is difficult for individual physicians to function in this environment. As a result, physicians are becoming part of larger organizations. This is taking the form of practice acquisition by hospitals, Independent Physician Organizations,

Management Service Organizations and Physician Hospital Organizations. It seems that the changes go on and on.

One is tempted to ignore these things and keep on practicing medicine just as we have done all these years. If only it was safe to do that. If Arkansas medicine follows the same route as other states have done, we will continue to see major changes. Managed care plans will grow exponentially.

Practice acquisition by hospitals and other companies will continue. Other physician groups will grow. Nurse practitioners will assume a much larger responsibility in providing primary care. Preventative care will be very important. Hospital utilization will decline. Practice guidelines will be in place for common problems. Physicians will lose even more autonomy.

Maybe we should learn from Seiko in the new environment that we find ourselves. The survival of our practices with any degree of autonomy will require new ideas and innovation. Those of us who refuse to change may well find ourselves just as the Swiss did, with loss of market share and out of business. ■

Editor's Note: What is your opinion of this editorial? Do you agree? Disagree? Comments are welcome, as always, and may be published in an upcoming Journal.



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Overview of Newborn Screening in Arkansas

Robert West, M.D.*

Cheryl Hale, R.N.C.**

Introduction

Since the introduction of the Guthrie test for phenylketonuria (PKU) in 1961, screening of newborns for genetic and other metabolic disorders has become a standard of care in all fifty states. Through the years, individual states have added a wide array of new screening assays to their newborn screening profiles, usually in response to mandates by their respective legislatures. The resulting lack of uniformity among states' newborn screening practices has become a frequent source of confusion for both parents and physicians. Furthermore, since the conditions screened for are relatively uncommon, parents (and perhaps some physicians) may at times question the utility of screening itself. In this brief article we review the conditions screened for in Arkansas to date, provide data on case detection, and suggest future possibilities for newborn screening.

Three disorders are currently screened for in Arkansas: PKU, congenital hypothyroidism (CH), and sickle cell disease. All fifty states mandate PKU and CH testing, while 40 provide at least some screening (voluntary or mandatory) for sickle cell. The three disorders will be discussed separately.

Phenylketonuria

Classic PKU is an inborn error of metabolism resulting from the lack of the enzyme phenylalanine hydroxylase. This enzyme catalyzes the conversion of phenylalanine to tyrosine. In the absence of enzyme activity, phenylalanine and its metabolites accumulate,

eventually leading to brain damage. Degeneration occurs rapidly, such that by the end of the first year untreated infants are typically severely retarded. Other features commonly seen in untreated cases include hypertonia, spasticity, microcephaly, and seizures. A seborrheic or eczematoid skin rash along with a peculiar musty odor have also been described. Almost all cases occur among white individuals, with most being fair-haired and blue-eyed.

By definition, infants with classic PKU have plasma phenylalanine levels above 20 mg/dL. However, so-called PKU variants are also associated with elevated phenylalanine levels. A small percentage of such cases are due to defects in tetrahydrobiopterin (BH_4) synthesis or recycling. BH_4 is a cofactor needed for the conversion of phenylalanine to tyrosine, which when absent results in moderate to severe elevations of phenylalanine and clinical features similar to those of classic PKU. However, the usual dietary treatment for classic PKU is unsuccessful in preventing neurological deterioration in these infants, probably related to concomitant under-production of the neurotransmitters dopamine and serotonin. At least three distinct enzyme defects are responsible for BH_4 deficiency.

Less severe degrees of hyperphenylalaninemia (5 - 20 mg/dL) may be seen in conjunction with *partial* reductions in phenylalanine hydroxylase activity. These children often develop normally, sometimes in the absence of specific therapy. Although recommendations vary somewhat by treatment center, it is generally agreed that infants and children having phenylalanine levels of greater than about 8 mg/dL should be monitored closely and that most should receive dietary therapy.

Consequences of PKU can be largely averted through early initiation of an appropriately conceived

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** Cheryl Hale, R.N.C., is a State Genetics Coordinator with the Arkansas Department of Health.

dietary plan that results in control of plasma phenylalanine levels. The diet must be formulated and supervised by an individual having extensive experience with the special metabolic needs of the phenylketonuric. Judging by the severe effects noted when insufficient amounts of phenylalanine, tyrosine, and total protein have been prescribed for PKU patients, over-treatment can be as harmful as under-treatment. With reasonably strict adherence to an appropriate regimen, however, most individuals with PKU can expect to attain normal intelligence with a minimum of neurological sequelae. In the past it was common to discontinue the diet at about six years of age. Because test scores of older children have been found to be positively correlated with the age at which dietary control is lost, it is now recommended that dietary treatment be continued into adulthood.¹

Due to the availability of an accurate, inexpensive screening technique along with a treatment which successfully prevents mental retardation, the cost-benefit ratio for PKU screening is quite favorable. In recognition of this, Arkansas Act 192 of 1967 mandated screening of all newborns in the state for PKU. At present, blood for this and the other newborn screening assays is collected on a filter paper form and shipped to the Public Health Laboratories in Little Rock. Levels of phenylalanine of ≥ 4 mg/dL are considered positive for screening purposes. While PKU testing in Arkansas is still performed using the semi-quantitative Guthrie method, it is anticipated that a quantitative fluorometric method will soon be employed by the state laboratory.

Results of Screening. Given an estimated incidence of about one in 15,000 for all forms of PKU and about 35,000 annual births it can be predicted that two to three cases of PKU will be detected in Arkansas in an average year. Follow-up data collected by the Newborn Screening Program at the Department of Health tend to support the efficacy of screening in terms of detection. As seen in Figure 1, since screening began a total of 78 cases of PKU and its variants have been detected, for an average of 2.8 per year. Case detection has ranged from zero to six per year. Only one

case of hyperphenylalaninemia due to bipterin deficiency has been detected so far.

Since screening began, virtually all cases of PKU have been evaluated and managed through the UAMS Department of Pediatrics/Arkansas Children's Hospital (ACH) system. Some of the older children and adults with the disorder have been lost to long-term follow-up, related in part to the previous recommendations calling for termination of treatment at age six. Nonetheless, the Division of Genetics maintains an active caseload of 31 children and adolescents with the disorder. To date, standard intelligence/performance testing and clinical observation have revealed mild to moderate cognitive and attentional deficits among some Arkansas phenylketonurics. However, since screening began, no cases of severe mental retardation due to PKU are known to have occurred in the state. Formal, in-depth neuropsychological evaluation of PKU patients is now being planned by UAMS/ACH staff.

Congenital Hypothyroidism

Many different conditions are responsible for insufficient production of thyroid hormone in the newborn. In the United States, the most common cause by far is thyroid dysgenesis (aplasia or ectopic thyroid remnants). Other causes include defects of thyroxine (T_4) synthesis, endemic cretinism (iodine deficiency), fetal exposure to radioiodine, deficiency of thyroid-stimulating hormone (TSH), and various thyroid hormone and TSH receptor defects. Transient cases of hypothyroidism may also result from transplacental passage of maternal anti-TSH antibodies or from fetal exposure to maternal anti-thyroid medications such as propylthiouracil or methimazole. The overall incidence of CH is between 1:3,600 and 1:5,000, although the incidence among African-Americans is believed to be substantially lower.² Girls are said to be affected about twice as often as boys.

Clinical features of CH are usually not apparent at birth. They may appear gradually over a period of several months, delaying diagnosis in the absence of newborn screening. Affected infants may display prolonged physiologic jaundice, feeding difficulties, respiratory problems, excessive somnolence, sluggishness, and constipation. Physical findings may include large anterior and posterior fontanels, umbilical hernia, large protruding tongue, dry skin, coarse and brittle hair, myxedema, and delayed dentition. With time, growth is significantly delayed and there is persistent mental deficiency.

Treatment with sodium-L-thyroxine beginning in the first few weeks of life has been quite successful in preventing the growth and mental retardation associated with CH.³ Although therapy is lifelong, the synthetic hormone is inexpensive and well-tolerated when given at an appropriate dosage. Excellent guidelines

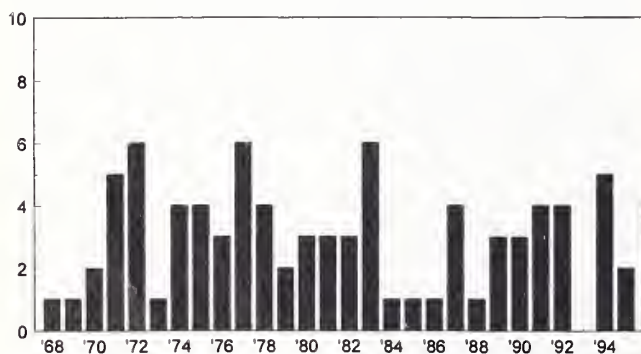


Fig. 1. Number of cases of phenylketonuria (including variants) detected in Arkansas each year since the inception of newborn screening.

for evaluation and management of infants with CH have recently been published by the American Academy of Pediatrics.⁴

Screening for CH in Arkansas, as in the rest of North America, involves assay of the initial filter paper specimen for T_4 . Values in the lowest 10% of each day's run are then tested for TSH. Presumptive positives for primary hypothyroidism have TSH values of ≥ 25 μ U/ml. Values of T_4 of ≤ 5 μ g/dl in conjunction with normal TSH values are also reported as abnormal. The low T_4 - "normal" TSH combination of values may be seen in association with prematurity, low thyroid binding globulin, secondary hypothyroidism (hypopituitarism), or primary hypothyroidism with delayed rise in TSH. Due to occasional human or technical error, or rare clinical situations in which the onset of hypothyroidism is delayed, even the best-designed newborn screening program is capable of missing cases. Thus, even in the face of normal screening results, physicians must be alert to the possibility of CH if clinical signs are suggestive.

Results of Screening. CH screening was initiated in Arkansas in response to Act 481 of 1981. National incidence estimates would predict that about seven to nine cases would be detected in the state during an average year. As shown in Figure 2, case-detection has roughly achieved the expected results. Between 1981 and 1994 a total of 95 cases of primary CH were confirmed, for an average of 6.8 per year and an approximate incidence of 1 in every 5,200 births. Through September 1995 a total of 58 females and 39 males have been detected (about a 1.5:1 ratio). African-Americans have accounted for nine cases detected so far, for an estimated incidence of 1:13,000 in that population. The one to two cases of transient hypothyroidism detected on average each year are not included in these figures.

Because congenital hypothyroidism is managed largely by primary care physicians throughout the state, little systematic data on the long-term mental and physical outcomes of treated patients are available. The Newborn Screening Program does attempt to assess treatment status for known patients up to at least five years of age, however. The latest such survey revealed that among those for whom follow-up information was available (71%), all were receiving appropriate therapy for CH. In the remainder of cases, follow-up information was not available due to the child having moved, etc.

Sickle Cell Disease

This well-known autosomal recessive disorder of hemoglobin production is caused by substitution of a single amino acid (glu→val) at position 6 of the beta globin chains. In its most severe form (S-S disease), sickle cell is responsible for such varied sequelae as vaso-occlusive (pain) crises, splenic sequestration, aplastic crises, splenic dysfunction with predisposition

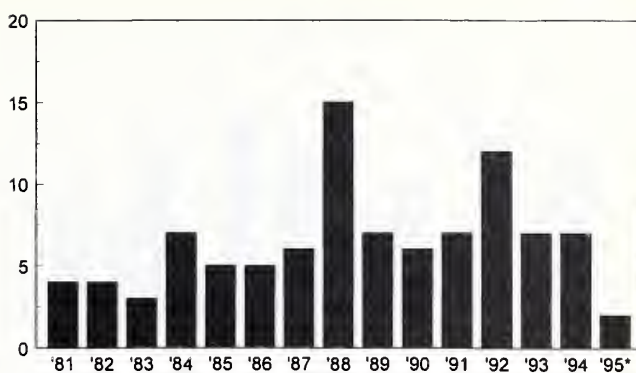


Fig.2. Number of cases of congenital hypothyroidism detected in Arkansas since the inception of newborn screening ('95 = partial year).

to sepsis from encapsulated organisms, acute chest syndrome, and stroke. Homozygous S-S disease occurs in approximately 1:500 to 1:600 African Americans, while the heterozygous carrier state (trait) appears in about 8% of this population. Somewhat milder forms of the disease involve compound heterozygote states, most commonly sickle-hemoglobin C (S-C) and sickle-B⁺-thalassemia.

The stimulus for newborn screening for hemoglobinopathies was a 1986 NIH collaborative study on the effects of penicillin prophylaxis in preventing severe bacterial (primarily pneumococcal) infections in infants and young children with the disorder.⁵ The study provided compelling evidence of benefit from a twice daily regimen of penicillin V initiated prior to four months of age. More recently, guidelines from an expert Agency for Health Care Policy and Research (AHCPR) consensus panel recommended initiation of prophylaxis before two months of age.⁶ Early detection is therefore vital.

Act 573 of 1987 mandated screening of all non-Caucasian newborns in Arkansas for sickle cell disease. However, consistent with recommendations by AHCPR as well as the policies of virtually all states which do sickle testing, all newborns in Arkansas are screened. This practice helps eliminate missed cases due to incorrect recording or "assignment" of race by hospital personnel, as well as costs and potential errors related to selective testing by the Public Health Laboratories. In Arkansas, isoelectric focusing followed by confirmatory citrate agar electrophoresis is the screening methodology employed.

Results of Screening. A previous article in *The Journal* summarized results from the first two years of testing.⁷ Subsequently, case detection has proceeded at a fairly steady pace (see Figure 3). Since universal screening began in January 1989, a total of 95 cases of presumed S-S and 48 cases of S-C have been uncovered. All infants found to have one of these disorders have been black. Factoring in twelve other known cases of presumed homozygous disease involving resident newborns screened in surrounding states, the estimated

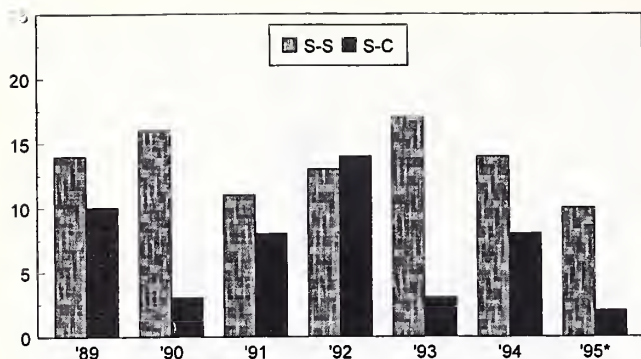


Fig. 3. Number of cases of presumed S-S and S-C disease detected in Arkansas through newborn screening ('95 = partial year).

incidence of S-S among African-Americans in Arkansas is about one per 515 births. Eighteen cases of hemoglobin C disease and ten cases of hemoglobin E disease have also been detected through newborn screening.

About 600 infants are found to have sickle trait each year, including approximately 50-60 infants whose newborn screening slip indicates race as "white." The latter is not surprising in view of the multiple ethnic backgrounds associated with sickle hemoglobin. Counseling for families of infants found to have sickle and other hemoglobin traits is offered, at no charge, through the Newborn Screening Program.

Short-term follow-up of sickle disease states has indicated rates of entry to appropriate care (including antibiotic prophylaxis) of 85-100% for each year since screening began. Longer term follow-up by the Newborn Screening Program reveals that of all cases of S-S disease detected since 1989, 94% are currently known to be under care of a physician. Seventy-two percent of S-C cases are known to be under care; follow-up information is not available for 13% of this group. Unfortunately, so far two deaths directly related to S-S disease are known to have occurred among the cases detected. One of these deaths involved pneumococcal sepsis in a toddler known to have had penicillin prophylaxis prescribed. The other involved a case of "probable meningitis" in a four year old not thought to be taking penicillin at the time.

Current Issues

One of the most pressing concerns relative to newborn screening is the early discharge (i.e. < 24 hours of age) of neonates from hospitals. A study by Doherty et al in 1991 implied that with a cutoff of 4 mg/dL, all cases of PKU could be detected with screening after 24 hours of age.⁸ However, before 24 hours of age, significant numbers of cases are likely to be missed on initial screening. Lowering the cutoff value for suspected PKU, to 2 mg/dL for example, would probably detect all cases but would also result in thousands of false positive results requiring follow-up each year in

Arkansas. Another costly but effective option, already undertaken by a few states, would be to mandate a second screening of *all* newborns at one to two weeks of age. For now, it is imperative that hospitals and physicians involved in early discharge adhere to the Arkansas rules and regulations which call for screening of all newborns prior to discharge, and repeat screening of early-discharged infants within the first seven days of life. Should this "selective" second screening policy prove inadequate, however, implementation of one of the other options will likely be necessary due to the rapidly increasing number of babies discharged early in the state.

Early discharge also creates problems for CH screening. As opposed to the PKU dilemma, the problem here concerns excessive false positives generated due to the physiologically higher TSH levels present in the first day or two of life. Excessive positive results raise program costs through follow-up time and testing, and also generate unnecessary parental anxiety. On the other hand, raising the TSH cutoff value carries risk of missing true cases of CH.

Apart from early discharge, another issue being closely examined is standardization of newborn screening across the U.S. A movement is afoot to establish standards that would make screening practices more uniform from state to state, theoretically resulting in higher quality, less confusion and better communication among states regarding infants who cross state lines. However, substantial concerns relating to whether all states have the resources or desire to meet the proposed guidelines have yet to be resolved. In particular, changes in screening methodologies would entail major expenditures for many states.

Future Prospects

The latest addition to the newborn screening profile in Arkansas, galactosemia, was mandated by Act 113 of 1995. The Department of Health anticipates initiation of galactosemia screening in early 1996. This topic will be explored in detail in an upcoming *Journal* article.

It is likely that newborns in Arkansas will be screened for additional disorders in the not too distant future. New technologies such as the highly automated fluorometric and enzyme immunoassay systems already developed have made it possible to perform assays for a variety of metabolic disorders at a fraction of the previous costs. Thus, cost-benefit ratios for even relatively rare disorders such as maple syrup urine disease and biotinidase deficiency may now be favorable. In Arkansas, perhaps the most reasonable choice for consideration next is congenital adrenal hyperplasia (21-hydroxylase deficiency), which occurs in about 1 in 12,000 births overall.² Males with the salt-wasting form of the disorder are at particular

risk for early death unless promptly diagnosed and treated.

In summary, newborn screening in Arkansas has had the cumulative impact of identifying, and facilitating treatment for, hundreds of infants at risk for premature death or serious disability. Within the context of a rapidly changing health care system, continued attention to issues of costs and quality of this public health program will be necessary in order to expand upon the progress made to date.

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One Doctor's *Field of Dreams*

William R. Scurlock, M.D., F.A.C.S.*

As a kid in Waldo, Arkansas (Population 1,492), I grew up in the era of small town baseball. Every little community had a baseball field. In that day prior to television, baseball drew a great deal of local interest. One could always expect to see a large crowd at games on Saturday or Sunday afternoon. A great rivalry between the teams was always present. Newspapers always carried the box score and description of the games. Wherever men would gather, whether it be church, the barber shop, or the billiard hall, the conversation sooner or later turned to baseball.

I was the typical lad who lived and breathed baseball from the first sign of spring until the autumn leaves fell. Like so many of you, I could give you the name of every major league player, their position, batting average, and number of homeruns.

My best friend was Bill. It so happened that Bill's dad was a major league baseball player. Bill's dad was Travis Jackson, the shortstop for the old New York Giants 1921-1937. His playing days were followed by several years as a coach for the Giants and later the Milwaukee Braves. Since I came along in the late 1930's and 40's, I will admit I did not fully appreciate Mr. Jackson's playing years. All I knew was that I could always expect him to return to Waldo after every baseball season was over. I could expect him to attend all of our basketball games, help with transportation, support the team and the school, and assist with the coaching as his time would permit.

During those days every young man who loved the game dreamed of playing major league ball. I certainly

was no exception. I was fortunate in the early 1950's to have the opportunity to attend a tryout camp with the Saint Louis Cardinals. Paul Dean (brother of Dizzy Dean) managed the camp at that time. Paul, also known as "Daffy," was an ex-Cardinal pitcher and was then a scout for the club. I shall never forget one thing he said to us in his opening remarks. He said, "Men, if you don't make it to the big leagues, don't feel bad, only one in 2,800 do." I found out there was a giant leap from semi-pro to professional baseball. Very few were chosen. Needless to say, I was not one of them.

I continued my education and chose the medical profession. Following college, medical school, internship, and surgery residency, I entered a general surgery practice in El Dorado, Arkansas. Travis Jackson had retired in Waldo. Since I lived only 30 miles away, I would occasionally see Bill and his dad.

As the years went by, I began to realize Travis Jackson's great career as a shortstop. Even in his early years, Giant manager John McGraw appointed him team captain. This was a great compliment in an infield whose members all are now Hall of Famers. He topped a .300 batting average six times in his career. His lifetime batting average was .291. He hit 21 homers in 1929 and had a batting average of .339 in 1930. These were very impressive stats for a shortstop. He was voted the outstanding major league shortstop by *The Sporting News* in 1927, 1928, and 1929. This was prior to all-star teams and included both the American and National Leagues. His glove work, along with the impressive batting stats for a shortstop of his era, convinced the Veterans Committee to choose him for

* William R. Scurlock, M.D. is a retired general surgeon and lives in El Dorado, Arkansas.

the Baseball Hall of Fame in 1982. This is the greatest accolade a player can receive.

Needless to say, there was much excitement around Waldo following this announcement. It became my privilege to accompany Mr. Jackson to Cooperstown, along with Bill, Mrs. Jackson, their daughter and son-in-law, my uncle, cousin, and my 12-year-old son, John. A local businessman loaned his private plane for the trip.

Cooperstown is a relatively small town in Mid-New York State. It is the alleged site of the first baseball game ever played. Doubleday field continues to host a "Hall of Fame" game every year between two major league teams. Carl Hubbell once said as he stepped off the train, "So this is where all the grief started."

The Hall began as a modest brick building in 1939. It has been enlarged and improved many times. They now have a real showcase composed of long rows of individual display cases containing memorabilia, awards, and plaques for each player. The array of original balls, bats, gloves, and photographs can quickly cast a spell on the baseball fan. One can easily imagine Ruth, Gehrig, Cobb, or even Shoeless Joe Jackson, stepping right out of the cornfield into the room.

I was surprised to find that Cooperstown had only one hotel. This wonderful old lodge had been reserved for the Hall of Fame members and inductees. The entire building was roped off and heavily guarded. We were delighted, however, to find that we were admitted along with Mr. Jackson and could come and go with a special pass.

The following two days in this hotel were absolutely unbelievable. The lobby, dinning room, and huge rear porch were constantly filled with Hall of Fame greats. These men were my idols during my youth. To be in the presence of players like DiMaggio, Williams, Musial, Spahn, Feller, Ernie Banks, and so many others was difficult to comprehend. What do baseball Hall of Famers talk about? The same things we do, that is golf, the politics of baseball, the cattleranch, etc. There was very little shop talk about games, records, and the like. I found them extremely friendly, very kind, and very often comical. In this relaxed atmosphere, I came to know and appreciate these men as very fine gentlemen.

Now I thought this was the ultimate experience. Then an even greater thrill took place for me. When I attempted to cross the roped off area someone shouted, "There's Johnny Mize." The large crowd and photographers quickly engulfed me for an autograph. This happened every time I would leave the building. Now it so happened that Johnny Mize was my very special boyhood hero. I would wait anxiously for the Arkansas paper to arrive every morning to see what "The Big Cat" had done. During those days he was a homerun slugging first baseman for the Giants. He had previously been with the Cardinals and later the Yankees. Mize had been named to the Hall of Fame in

the previous year, 1981.

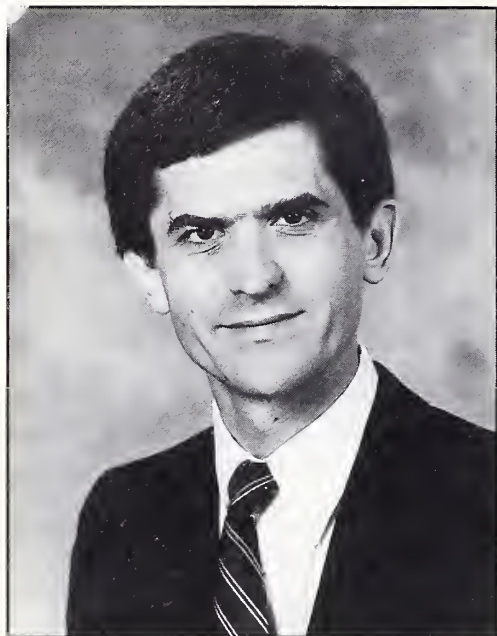
In spite of my repeatedly telling the crowd that I was a doctor and not a ball player, they were persistent. Now the real Johnny Mize happened to be right there in the hotel. Having the same height and body build as Mize, I knew we needed to clear up the confusion. So I approached Mize and asked if he would appear out front and convince these people. In a moment of fun, as these men were prone to have, he turned to a fellow player and asked, "What should I do?" The player answered, "Tell him to just sign your name!" So I became a Hall of Famer. In all honesty, I did always explain to them that I was just a "look alike" but that made no difference to them. They were just as pleased with that autograph. What an undeserved thrill!

Travis Calvin Jackson was a great man. A man of outstanding and noble character. He was always a very tough competitor, but a real gentleman. To those who knew him well, he remained a very humble, kind man. Following his retirement he spent some time every day answering requests for autographs. He averaged three letters per day. He never charged a dime. Although his quite frail body at age 82 was riddled with crippling arthritis and required heavy medication, he never left the long lines of autograph seekers until every kid was satisfied. I shall never forget at one point during his acceptance speech, he turned to face the members on the stand (all baseball greats) and said, "Now I know it is a great temptation to avoid these long lines of autograph seekers, but it is our duty. These kids are the major league players of tomorrow and we owe it to them." My little hometown will always be proud. Travis Jackson died on July 27, 1987, in Waldo, Arkansas.

In a time when baseball is losing its popularity there is still no greater thrill for the baseball fan than to visit Cooperstown. There is a very good reason baseball is our national pastime. Baseball requires the utmost in individual athletic ability, mental toughness, team play, and coaching strategy. To be named to the Hall of Fame is the highest honor for an American athlete.

There was a time when I would have given all I had to play major league baseball. Instead, I was redirected into the highly rewarding field of general surgery. I will never have any regrets whatsoever. I now have two sons in medicine. John is now a junior in medical school. I would encourage any young person to enter the field of medicine. I would certainly do the same again.

But, having said that, I would have to add...I will always remember this experience. It was exactly like stepping into a *Field of Dreams*. A chance to reminisce with the past...and for just one shining moment, the opportunity to get just a glimpse of what it would feel like to be a baseball Hall of Famer. What a tremendous experience it was for me. ■



William E. Golden, M.D., Elected President of the American Society of Internal Medicine

William E. Golden, M.D., director of General Internal Medicine at the University of Arkansas for Medical Sciences (UAMS) in Little Rock, was installed as president of the American Society of Internal Medicine (ASIM) at the Society's 39th Annual Meeting. He was elected president-elect last year and has been a member of ASIM's Board of Trustees since 1986.

At UAMS, Dr. Golden - who was named to his current UAMS position in 1983 - maintains an active internal medicine practice, serves as an associate professor of medicine, and supervises students and residents in their outpatient primary care training.

In addition to UAMS responsibilities, Dr. Golden is vice president for clinical quality improvement of the Arkansas Foundation for Medical Care and has been recognized for his quality improvement studies on the state's Medicare and Medicaid programs. He also is a board member of the Center for Clinical Quality Evaluation and serves on a National Committee for Quality Assurance (NCQA) committee charged with updating quality standards for the managed care industry. Recently he completed a two-year, federally funded program to evaluate the dissemination of practice guidelines to physicians' offices, and has served on a practice guidelines development panel for the Agency for Health Care Policy and Research.

As a member of the executive committee of ASIM's Internal Medicine Center to Advance Research and Education (IMCARE), Dr. Golden initiated IMCARE's practice guidelines network, which uses internist-volunteers to "reality test" practice guidelines prior to completion and dissemination to physicians. Also through IMCARE, he helped develop a series of socioeconomic education modules to help internal medicine residents and fellows better understand the "real world" of medical practice.

Currently, Dr. Golden is chair of the American Medical Association's (AMA) Council on Medical Education and a senior member of the AMA's Association of American Medical Colleges liaison committee on medical education. Previously, he chaired an AMA task force on physician workforce planning, another special interest of his.

Dr. Golden received his bachelor's degree from Brown University and a medical degree from Baylor College of Medicine. He was a Morris Fishbein Fellow in Medical Journalism and a Robert Wood Johnson Clinical Scholar. He was certified by the American Board of Internal Medicine in 1982 and received a special certificate in geriatrics in 1988.

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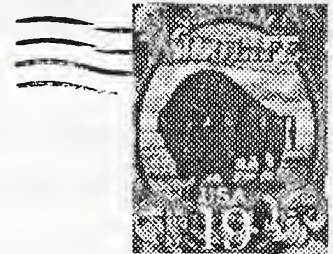
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a new year of health, happiness
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antibiotics. Your doctor even
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two weeks previously. I'm starting
to feel good again. God bless you.

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From left to right: Sen. Fay Boozman, M.D., Rep. Scott Ferguson, M.D., Sen. Vic Snyder, M.D., Congresswoman Blanche Lincoln and AMS Governmental Affairs Director Lynn Zeno.

Physician Members of Arkansas Legislature Meet with Arkansas Congressional Delegation

State Senator Fay Boozman, M.D., of Rogers; State Senator Vic Snyder, M.D., of Little Rock; and State Representative Scott Ferguson, M.D., of West Memphis (Chairman of the AMS Governmental Affairs Committee); along with AMS Director of Governmental Affairs Lynn Zeno met with the Arkansas Congressional Delegation and their key staffers in Washington prior to the U.S. House of Representatives Budget Reconciliation (Medicare) vote.

The discussion centered around concerns about the deep financial cuts proposed under the Medicare budget and its impact on rural hospitals, and Medicare patients' access to medical care. Other measures discussed were:

- * Language allowing "Provider Sponsored Networks" and accompanying antitrust reforms.
- * A \$250,000 cap on non-economic damages in medical liability cases, as well as other legal reforms.
- * Regulatory reform including sensible relief from CLIA regulations and STARK I & II self-referral laws.
- * Optional "Medical Savings Accounts" for Medicare recipients.
- * A prohibition against federal preemption of state "Any-willing Provider" protections.



Lauren Gaddy and Ed Fry of Congressman Ray Thornton's staff visit with Sen. Vic Snyder, M.D.



(From left to right) U.S. Rep. Jay Dickey, State Sen. Vic Snyder, M.D., U.S. Rep. Tim Hutchinson, State Sen. Fay Boozman, M.D., and State Rep. Scott Ferguson, M.D.

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AN UPDATE ON CARDIOGENIC SHOCK

Cardiogenic shock is the leading cause of death of patients hospitalized for acute myocardial infarction (MI). This complication of acute MI occurs in approximately 10% of patients and is accompanied by 80% mortality. Unfortunately, over the last 20 years, the incidence and mortality of this condition is unchanged.¹ In this issue of *CCU*, I review recent advances in treatment that may improve survival of this near universally fatal condition.

Intra-aortic Balloon Pump Counterpulsation. The use of the intra-aortic balloon pump to augment diastolic coronary artery perfusion and lower systemic vascular resistance has become a mainstay in the treatment of acute MI complicated by cardiogenic shock. Interestingly however, in the two randomized trials of the use of the balloon pump in acute MI, this therapy by itself, did not change mortality (Table 1).^{2,3} These studies show that the balloon pump may provide short-term hemodynamic stability, however, long-term survival seems dependent on adjunctive revascularization.⁴

Thrombolytic Therapy. Recently it has been noted that thrombolytic therapy used by itself is also ineffective in cardiogenic shock. Prewitt and colleagues showed, in an animal model of cardiogenic shock, that the velocity of clot lysis with r-tPA was markedly depressed in the setting of hypotension. The use of r-tPA and an intra-aortic balloon pump doubled the rate of clot lysis (9% lysis per 15 minute without the balloon pump, versus 17% per 15 minutes with the balloon pump, $P < 0.025$). Similar results were noted with the aggressive use of norepinephrine to attain a systolic

blood pressure of 130 mmHg.⁵ These studies show that hypotension substantially depresses the rate of clot lysis and that there is marked improvement in the rate of lysis when the blood pressure is normalized with either the intra-aortic balloon pump counterpulsation or norepinephrine.

The outcome of patients with acute MI complicated by cardiogenic shock in the GUSTO - 1 (Global Utilization of Streptokinase and Tissue plasminogen activator for Occluded coronary arteries) and the International trial has been presented. These trials evaluated the value of the early open artery with the use of accelerated, weight adjusted r-tPA or streptokinase. Overall, the mortality remains exceeding high (Table 2). Data from these trials both show that streptokinase is the superior thrombolytic drug for patients with acute MI complicated by cardiogenic shock. This finding is perplexing and paradoxical, because r-tPA established reperfusion faster and causes less hypotension. However, possible explanations of the superiority of streptokinase include: 1) the prolonged systemic fibrinolytic state continues to act on the large clot burden with low coronary artery perfusion; 2) lower blood viscosity; and 3) greater clot penetration by less fibrin-specific agent due to less binding of the agent along the surface of the clot.⁶

Randomized Trials of Reperfusion Strategies. There are two ongoing randomized clinical trials to decide the optimal initial management of patients with acute MI complicated by cardiogenic shock. The SHOCK (SHould we revascularize Occluded Coronaries for cardiogenic Shock) is a prospective randomized multicentered study, sponsored by the National Institute of Health. This study has a target enrollment of

* Dr. Talley is Professor of Internal Medicine & Associate Director, Division of Cardiology, UAMS.

Table 1:

**Randomized Trials of Intra-Aortic Balloon Pump
Counterpulsation in Acute Myocardial Infarction**

Reference	# patients	Peak CK-MB		Mortality	
		IABP	Control	IABP	Control
O'Rourke ²	30	243	224	50%	44%
Flaherty ³	20	1352	587	40%	30%
Combined				46%	38%

Abbreviations: CK = creatine kinase, IABP = intra-aortic balloon pump counterpulsation

Table 2:

A Comparison of r-tPA and Streptokinase in Cardiogenic Shock

	Total Patient Enrollment	Cardiogenic Shock	Total Mortality	SK/ASA Mortality	r-tPA/ASA Mortality
International Trial	20,891	2%	71.5%	64.9%	78.1%
GUSTO Trial	41,021	1%	57.8%	56.4%	61.3%

Abbreviations: ASA = aspirin, GUSTO = Global Utilization of Streptokinase and Tissue plasminogen Activator for Occluded coronary arteries, r-tPA = recombinant tissue plasminogen activator

328 patients in cardiogenic shock. Patients are randomized to receive optimal medical management (including an intra-aortic balloon pump and thrombolytic therapy) or cardiac catheterization with mechanical revascularization (balloon angioplasty or coronary artery bypass graft surgery). Approximately 100 patients have been enrolled thus far.

The SMASH (Swiss Multicentered study of Angioplasty for SHock) trial is a prospective multicentered trial of patients in cardiogenic shock. Patients are randomly assigned conservative or invasive treatment. Enrollment is one-half completed.

Conclusions. Acute MI complicated by cardiogenic shock is a dreadful disease. Right now, ideal initial management includes insertion of an intra-aortic balloon pump and administration of thrombolytic therapy, preferably, streptokinase. The role of urgent coronary arteriography and mechanical revascularization is speculative and is under intense investigation in randomized clinical trials.

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State Health Watch

Information provided by the Arkansas Department of Health

Increased Hepatitis Incidence in Arkansas and Surrounding States

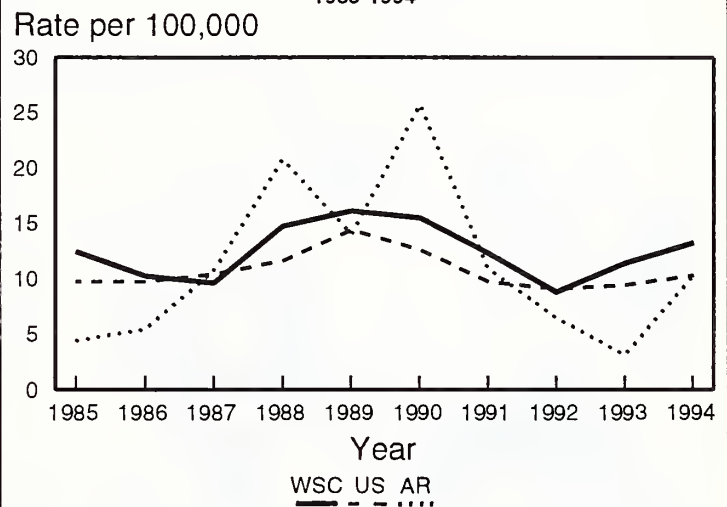
In 1995, there has been an increase in the numbers of Hepatitis A (HA) cases reported in Arkansas, with 489 cases reported by mid-October. Recent years have shown a cyclic rise and fall in the disease in Arkansas, in the West/South Central Region, and nationally. (See Graph 1) Annual state totals have ranged from lows of 74 in 1993 and 100 in 1985 to highs of 608 in 1990 and 477 in 1989.

Surrounding states have experienced similar cyclic HA incidence, with 1995 bringing large increases. (See Graph 2) Tennessee, for example, is experiencing an outbreak in the Memphis/Shelby county area, with over 1,260 cases reported. Another large outbreak is occurring in eastern Tennessee. Both of these outbreaks have involved child care settings, with the 0-9 year age group predominating. In the previous ten years, the largest number of cases reported statewide in Tennessee, 347, was in 1994.

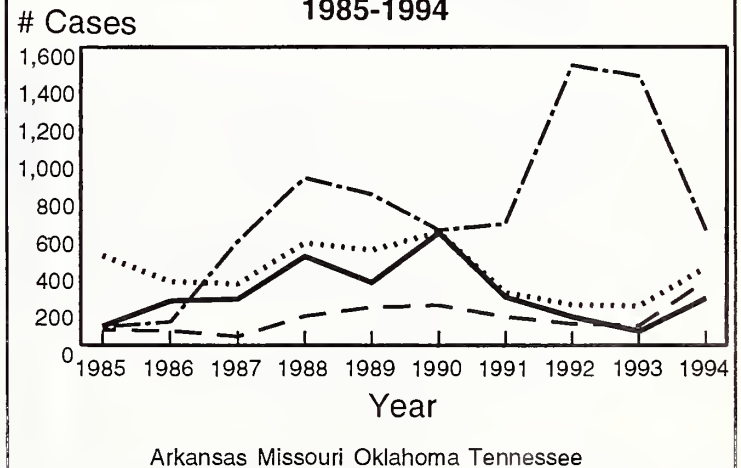
Hepatitis A has been reported at record rates in Oklahoma, as well. For the same period in 1995, over 1,000 cases have been reported, giving a provisional incidence rate of 32 cases/100,000 (statewide). A single county, adjacent to the Sebastian/Crawford county area, has had 138 cases reported, for a county incidence rate of over 400/100,000.

Outbreaks of HA in the Garland county and Sebastian/Crawford county areas have swelled the numbers reported to the Arkansas Department of Health. While no single point sources have led to large case groups, community-wide spread of HA has occurred. As of mid-October, the combined outbreak total of 322 cases represents 66% of the 489 cases reported statewide. Both the Garland county and Sebastian/Crawford county areas have had case loads far in excess of their usual rates. Combined, these areas reported only 14 cases in 1994. Counties reporting the largest number of cases in 1995 are: Garland, 134; Sebastian, 82;

Graph 1
Hepatitis A, US, Arkansas, and W/S Central US
Rates per 100,000 population
1985-1994



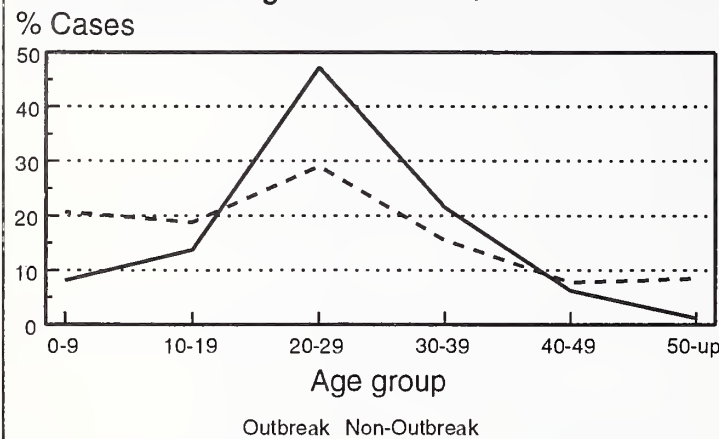
Graph 2
Hepatitis A in AR, OK, MO and TN
Crude Case Rates
1985-1994



Graph 3

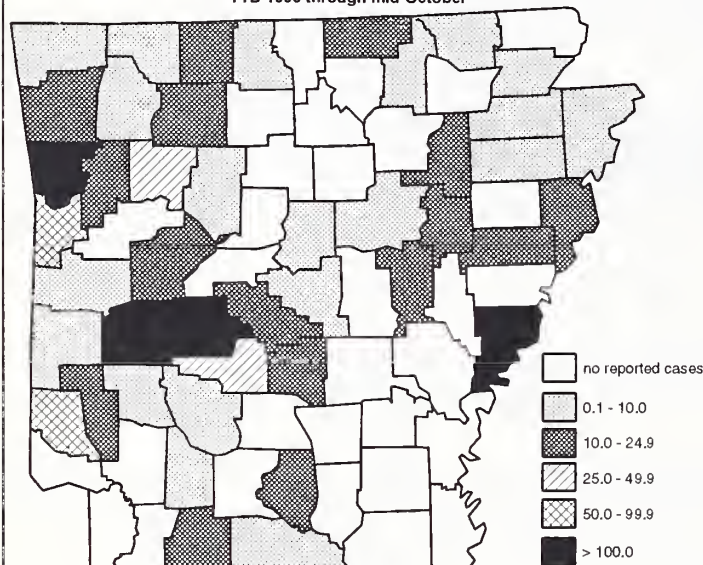
Age of HA Cases, (% by Age Group)

Outbreak vs. Non-Outbreak
Through Mid-October, 1995



Hepatitis A Case Rate per 100,000 pop. by County

YTD 1995 through mid-October



Statewide case rate is 20.8

Crawford, 63; Phillips, 40; Montgomery, 22; Washington, 21; Pulaski, 17. In all, HA has been reported in 44/75 counties. (See map for the incidence rate of HA.)

The age distribution of persons involved in the 1995 outbreaks in Arkansas differs slightly from the non-outbreak cases. (See Graph 3) Cases involved in outbreaks have been clustered in the 20-29 age group (47%) more than the non-outbreak cases (29%). This reflects the greater social activity in this group and the higher risk of disease which may be related to various social activities. Also, a much smaller proportion of outbreak cases are under 10 years of age than are non-outbreak cases. The Tennessee outbreaks show a more typical age distribution, with a higher proportion of cases in the 0-9 year age group. The age distribution of Oklahoma cases is more similar to Arkansas with the 20-29 year age group predominating.

Prompt reporting of suspected cases by hospitals and physicians and the rapid availability of confirmatory testing has enabled the Arkansas Department of Health to perform rapid follow-up and investigation of reported cases. As the primary method of case prevention has been the administration of Immune Globulin (IG), the rapidity of reporting greatly influences the ability to control the spread of HA. Unless IG can be administered to exposed contacts within 14 days, no benefit may be expected. ■



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Reported Cases of Selected Reportable Diseases in Arkansas

Profile for September 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Sept. 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	11	103	140	105	187	130
Giardiasis	6	71	82	114	126	150
Shigellosis	7	85	139	132	193	201
Salmonellosis	41	201	432	311	534	402
Hepatitis A	74	452	190	55	253	74
Hepatitis B	8	50	41	75	60	90
HIB	0	3	3	8	6	8
Meningococcal Infections	1	25	41	23	55	27
Viral Meningitis	1	22	57	66	62	79
Lyme Disease	0	7	15	8	15	8
Rocky Mountain Spotted Fever	4	27	18	15	18	17
Tularemia	1	19	20	34	23	36
Measles	0	2	1	0	5	0
Mumps	1	5	5	7	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	586	3844	5506	5316	7078	7590
Syphilis	83	910	993	1237	1324	1612
Legionellosis	0	1	10	5	16	6
Pertussis	4	35	32	14	33	17
Tuberculosis	13	159	197	165	264	209

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Arkansas HIV/AIDS Report

1983-1995

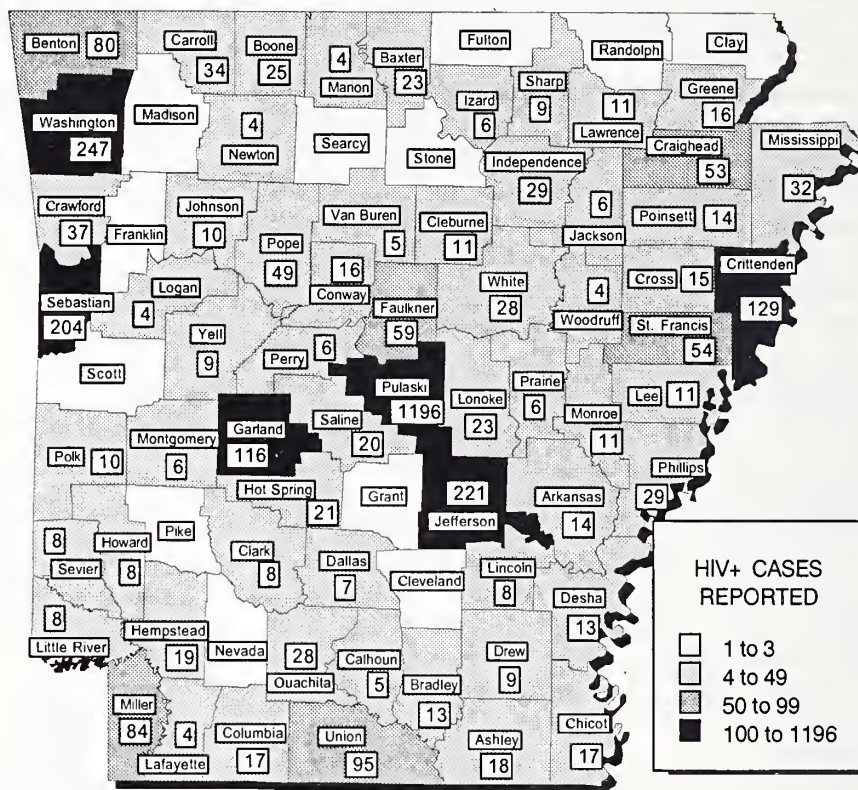
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of State agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



County of residence at the time of test for the 3,351 Arkansans reported to be HIV+. (10/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	291	2,778	83
	Female	8	26	37	68	85	81	94	90	84	573	17
AGE	<5	1	1	2	8	13	6	3	7	2	43	1
	5-12	0	1	1	5	1	2	1	0	1	12	0
	13-19	0	7	8	14	19	25	11	22	12	118	4
	20-29	33	110	123	183	149	156	175	145	114	1,188	36
	30-39	44	86	104	196	208	179	168	171	156	1,312	39
	40-49	22	25	35	56	70	67	65	77	59	476	14
	>49	8	6	11	17	22	38	23	35	31	191	6
RACE	White	87	170	174	328	298	292	278	259	228	2,115	63
	Black	21	69	108	151	184	173	163	183	136	1,189	35
	Hispanic	0	1	2	1	3	4	1	7	3	22	1
	Other/Unknown	0	2	3	2	3	8	5	15	8	25	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	120	1,680	50
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	39	510	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	21	232	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	87	38	472	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	3	43	1
	Undetermined	1	20	35	41	23	12	9	35	153	329	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	375	3,351	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1995

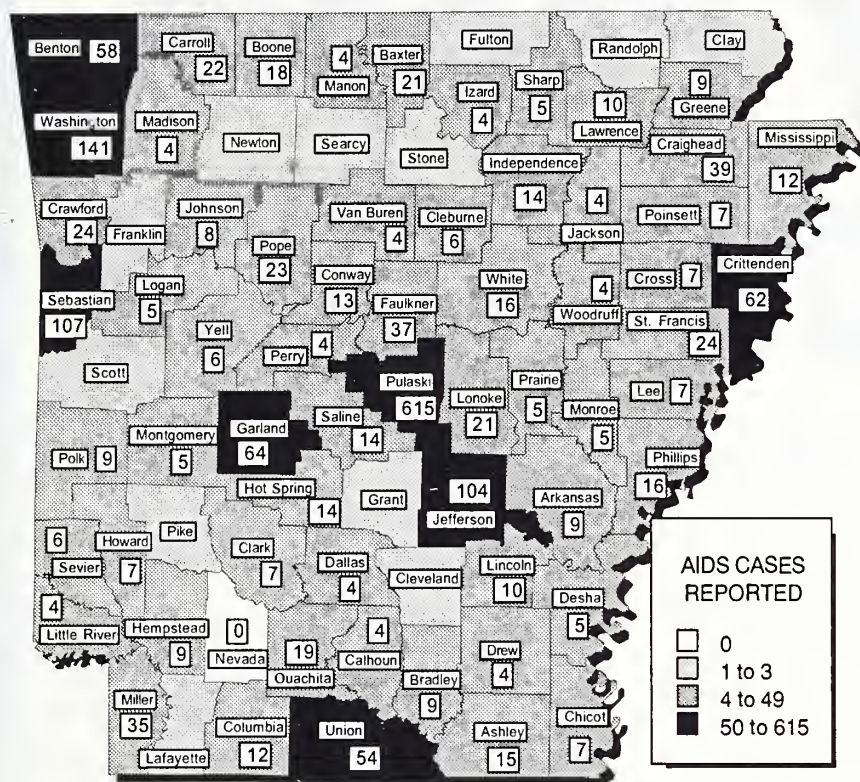
AIDS In Arkansas

Reporting Requirements

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Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



Of the 3,351 Arkansans reported to be HIV+, 1,847 have been diagnosed with AIDS. (10/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	192	1,609	87
	Female	5	6	10	20	25	35	64	42	31	238	13
AGE	<5	0	1	1	6	6	3	2	1	2	22	1
	5-12	0	1	0	1	1	0	1	0	2	6	0
	13-19	0	0	0	4	3	2	4	3	1	17	1
	20-29	31	27	24	55	57	81	110	67	47	499	27
	30-39	39	36	41	78	80	128	178	133	100	813	44
	40-49	15	10	7	35	41	52	78	61	41	340	19
	>49	5	8	7	11	13	19	27	30	30	150	8
RACE	White	74	61	58	141	134	206	275	190	138	1,277	69
	Black	16	20	21	47	66	75	121	102	82	550	30
	Hispanic	0	0	0	0	0	2	1	2	3	8	0
	Other/Unknown	0	2	1	2	1	2	3	1	0	12	1
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	103	1,096	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	36	271	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	18	152	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	17	172	9
	Transfusion	2	7	3	7	11	3	2	4	2	41	2
	Perinatal	0	1	1	6	6	3	3	1	3	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	6	33	2
	Undetermined	0	2	1	3	1	1	2	9	38	58	3
AIDS CASES BY YEAR		90	83	80	190	201	284	400	295	223	1,847	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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Hazar, Derya Bora, Internal Medicine/Nephrology. Medical Education, Cerrahpasa Medical School, Istanbul, Turkey, 1990. Internship/Residency, Carney Hospital, Boston University, 1992/1993. Fellowship, Harvard University, Boston, MA, 1995. Board certified.

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HOT SPRINGS

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LITTLE ROCK

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OZARK

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Mitchell, Bruce Gregory, Family Medicine. Medical Education, UAMS, 1994. Residency, UAMS, 1997.

Moore, Kimberly Suzanne, Pediatrics. Medical Education, University of Texas Health Science Center, Houston, TX, 1994. Internship/Residency, UAMS, 1995/presently.

Shaw, Allison Michelle, Internal Medicine. Medical Education, UAMS, 1991. Internship, UAMS, presently.

Wilson, Patricia J., Internal Medicine/Dermatology. Medical Education, Marshall University Medical School, Huntington, WV, 1994. Internship/Residency, UAMS, 1995/1998.

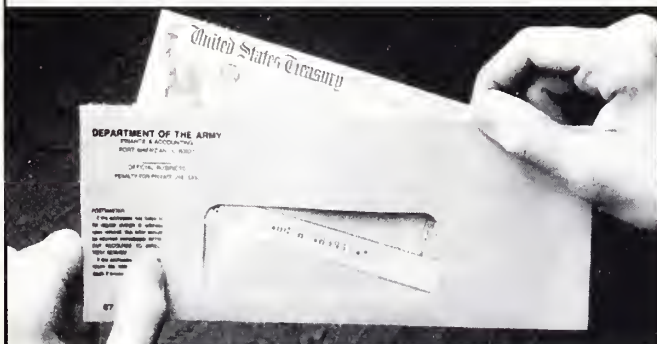
Yuskevich, Jeffrey Steven, Anesthesiology. Medical Education, Far Eastern University Institute of Medicine, Manila, Philippines, 1985. Internship, Frankford Hospital, Philadelphia, PA, 1992. Residency, Albert Einstein Medical Center, 1995. Fellowship, Arkansas Children's Hospital, presently.

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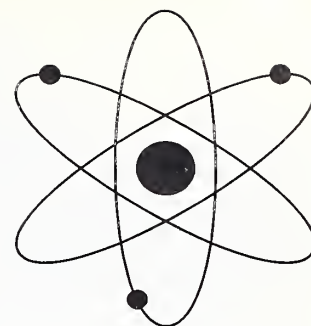
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Radiological Case of the Month



Steven R. Nokes, M.D.

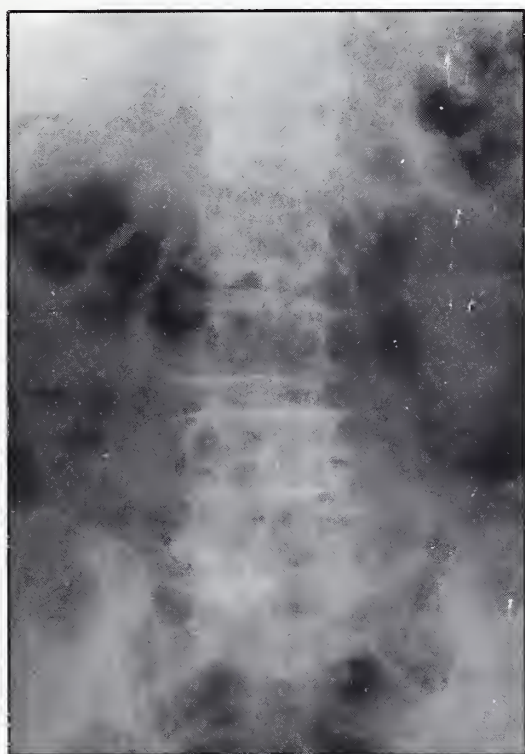


Figure 1: AP lumbar spine.



Figure 2: Lateral lumbar spine.

HISTORY:

This 67-year-old female presented back pain. AP and lateral lumbar spine films were obtained (Figures 1 and 2).

L₃ Posterior Element Metastasis

Diagnosis:

L₃ posterior element metastasis

Radiographic Findings:

There is destruction of the L₃ lamina, inferior articulating process and the spinous process best seen on the AP view. This was confirmed on a subsequent MR scan. This appearance has been referred to as the "empty vertebral body sign."

Discussion:

This case illustrates a perceptive difficulty encountered when interpreting plain films. It is much more difficult to perceive a normal structure that is absent than an abnormal structure that is present.

Plain films remain the initial imaging study in patients with low back pain although sensitivity and specificity are low. The differential diagnosis of low back pain is broad including degenerative disease, inflammation (arthritis), trauma, congenital stenosis, infection, neoplasm, and osteoporosis.

The spine is one of the most frequent sites of tumor metastasis, probably due to slow venous flow in Batson's plexus. The arterial wall is resistant to tumor penetration in the absence of infection. Osseous destruction of the posterior elements could also be secondary to infection or primary neoplasm.

References:

1. Kelen G, Noji E, Doris P. Guidelines for use of lumbar spine radiology. *Ann Emerg Med* 1986, 15:245.

Author/Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

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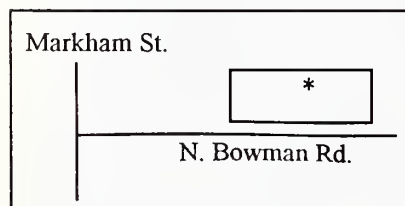


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AMS Newsmakers

At the 81st Annual Clinical Congress of the American College of Surgeons, which met in New Orleans in October, **Dr. Charles W. Logan** was elected as secretary of the organization's board of governors.

Dr. Wendell Ross of Van Buren was recently awarded with a plaque of appreciation from the Arkansas Highway Traffic Safety Administration for his assistance in a Drug Recognition Expert School sponsored by the Fort Smith police. Dr. Ross taught a class of officers about the effects of various drugs on the human body.

Dr. Gene Bruce Waldon of Rogers was a delegate in the 39th Annual Meeting of the American Society of Internal Medicine in October in Washington, D.C. Topics discussed include patient care in a managed care environment and the need to restructure the Medicare program to ensure solvency, affordability and continued quality care in the 21st Century.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of September are:

James W. Campbell	Hot Springs
Joseph Miller Gettys	Little Rock
Stephen Chas Manus	Fort Smith
Robert Carlton Power	Little Rock
Kenneth Vance Robbins	Little Rock
Douglas Alan Treptow	Rogers
Ronald Clark Walker	Little Rock
Charles Floyd Wells	Morrilton
Charlotte Renee Willis	Little Rock

Medicine in the News

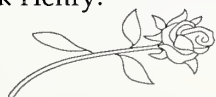
Health Care Access Foundation

As of November 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 10,043 medically indigent persons, received 18,676 applications and enrolled 37,266 persons. This program has 1,710 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

In Memoriam

J. Arnold Henry, M.D.

Dr. J. Arnold Henry, of Russellville, died Saturday, October 14, 1995. He was 82. Survivors include his wife, Julia Caldwell Henry; three sons, Dr. Andy Henry of Little Rock, Steve Henry and Jeff Henry of San Francisco, Calif.; one daughter, Julia Ann Maul of Russellville; three grandchildren, Mathew Maul, James Henry and Mark Henry.



John Charles Winters, M.D.

Dr. John Charles Winters, of Desha, died Sunday, October 22, 1995. He was 56. Survivors include his wife, Janine Navarro Winters; son and daughter-in-law, Michael John and Ann Winters of Palm Harbor, Florida; daughter, Elizabeth Mary Winters of Milwaukee, Wisconsin; step-son, Bruno Fournier of Montreal, Canada; step-daughter, Murielle Power of Safety Harbor, Florida; father, Alva Winters of Desha and four grandchildren. He was preceded in death by his mother.

Things To Come

January 12 - 13, 1996

What's New In General Surgery - 18th Annual Postgraduate Course. Hyatt Regency, Sacramento, CA. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

January 26 - 28, 1996

The 15th Annual Perspectives on New Diagnostic & Therapeutic Techniques in Clinical Cardiology. Lake Buena Vista, Florida. Sponsored by the American College of Cardiology. For more information, call 800-257-4739.

February 7-10, 1996

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

February 9 - 10, 1996

(Mardi Gras Season)

Neuropsychiatric Aspects of Primary Care: Anxiety and Depression - Across the Life Cycle. Royal Sonesta Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center, Office of Continuing Medical Education. For more information, call (504) 588-5466 or 1-800-588-5300.

February 10-13, 1996

Fifty-first Annual Postgraduate OB/GYN Assembly. Beverly Hilton Hotel, Beverly Hills, California. Sponsored by the OB/GYN Assembly of Southern California. For more information, call (213) 937-5514.

February 11 - 16, 1996

Emergency Medicine: 1996 19th Annual UCD Winter Conference. Hyatt Regency, Incline Village, Nevada. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

February 17-19, 1996

Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Office of Continuing Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 19 - 23, 1996

"New Technological Applications in Imaging & Intervention." Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Louisiana State University School of Medicine and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

March 18 - 22, 1996

PET and SPECT Imaging in Cancer Diagnosis and Treatment. Ihilani Resort and Spa, Kapolei, Hawaii. Sponsored by the Johns Hopkins University School of Medicine. For more information, call (410) 955-2959 or (410) 955-8582.

April 26 - May 3, 1996

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

May 13 - 24, 1996

7th Annual Tropical Health Update. Tulane University School of Public Health & Tropical Medicine, New Orleans, Louisiana. Sponsored by the Office of Continuing Education and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

June 6 - 9, 1996

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

Keeping Up

January 11, 1996

Liver Transplantation

Sponsored by UAMS AHEC - South Arkansas

Location: MCSA Union Campus Conf. Room #3

12:30 p.m. - 1:30 p.m.

No fee - Lunch served

1 Category I credit hour offered

January 25, 1996

Cardio Renal Considerations in Hypertension

Sponsored by UAMS AHEC - South Arkansas

Location: MCSA Union Campus Conf. Room #3

12:30 p.m. - 1:30 p.m.

No fee - Lunch served

1 Category I credit hour offered

February 8, 1996

Minimizing Medication To Maximize Result

Sponsored by UAMS AHEC - South Arkansas

Location: MCSA Union Campus Conf. Room #3

12:30 p.m. - 1:30 p.m.

No fee - Lunch served

1 Category I credit hour offered

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

EKG Conference, Mondays, noon, VAMC, room 5C114

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center

Grand Rounds, 12:00 noon, first Thursday of each month, Sparks Regional Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conference, December 28, 7:30 a.m., Board Room, Northeast Arkansas Rehabilitation Hospital.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

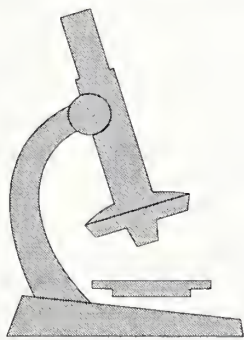
Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

1995 Arkansas Medical Society Membership Roster

as of November 10, 1995



Arkansas Medical Society Membership Roster

as of November 10, 1995

Denotes deceased member

Arkansas County

Burleson, Stan W.
Daniel, Noble B. III
Hestir, John M.
Millar, Paul H. Jr.
Morgan, Jerry D.
Northcutt, Carl E.
Pritchard, Jack L.
Speer, Hoy B. Jr.
Speer, Marolyn N.
Tracy, W. Lee
Wagner, Taylor
Yelvington, Dennis B.

Ashley County

Burt, Frederick N.
Garcia, Luis F.
Gresham, Edward A.
Grigsby, Benson
Heder, Guy W.
Rankin, James D.
Salb, Robert L.
Spohn, Peter J.
Thompson, Barry V.
Toon, D. L.
Walsh, Benjamin J.

Baxter County

Adkins, Kevin J.
Baker, Robert L.
Barker, Monty
Barnes, Gregory
Beck, Dennis
Chatman, Ira D.
Cheney, Maxwell G.
Chock, Daniel P.
Chock, Helga E.
Clarke, James S.
Condrey, Yoland M.
DeYoung, Bruce
Douglas, Donald S.
Dyer, William
Dykstra, Peter C.
Elders, John Gregory
Foster, Robert D.
Guenthner, John F.
Hardin, Philip R.
Johnson, Stacey M.

Kelley, Lawrence A.
Kerr, Robert L.
Kilgore, Kenneth M.
Knox, Thomas E.
Landrum, William
MacKercher, Peter A.
Massey, James Y.
McAlister, Matthew
Neis, Paul R.
Price, Michael D.
Regnier, George G.
Rigler, Wilson F.
Robbins, Bruce
Roberts, David H.
Saltzman, Ben N.
Short, Luke H.
Sneed, John W. Jr.
Stahl, Ray E. Jr.
Sward, David T.
TerKeurst, John
Trager, Marc
Tullis, Joe M.
Turner, Frederick C.
Wells, Gary
White, Edward
White, Richard B.
Wilbur, Paul F.
Wilson, Jack C.
Yoder, Robert Raymond

Benton County

Addington, Alfred R.
Aguilar-Guzman, Orlando F.
Alderson, Roger
Allen, L. Barry
Allen, William M.
Arkins, James
Atkinson, Thomas
Ball, Eugene H.
Becton, Paul Jr.
Benjamin, George
Benson, Stuart
Black, Randall Wayne
Bledsoe, James H.
Boden, Donna
Boozman, Fay W. III
Cantwell, Janet
Ciemens, R. Dale

Clower, John D.
Cohagan, Donald L.
Cole, Randall E.
Compton, Neil E.
Costaldi, Mario E.
Cuchia, John
Dang, Minh-Tam
Day, Geoffrey
Deatherage, Joseph R.
Denman, David A.
Diacon, W. Lindley
Donnell, Hugh Garland
Donnell, Robert W.
Elkins, James P.
Ewart, David
Fioravanti, Bernard L.
Friesen, Douglas L.
Garrett, David C. III
Goss, Stephen
Halinski, David
Harmon, Harry M.
Heiss, Nancy
Henderson, Oscar L.
Hitt, Jerry L.
Hof, C. William
Holder, Robert E.
Honderich, Jeff P.
Horner, Glennon A.
Howard, K. Lamar
Hull, Robert R.
Huskins, James D.
Huskins, John A.
Jacks, John W.
Jennings, William E.
Johnson, Christopher S.
Johnson, Royce Oliver II
Johnson, Steven P.
Keane, Patrick K.
Knapp, James R.
Lanier, Karen A.
LeBoeuf, Dorothy
Lewis, Rebecca C.
Marciniak, Douglas L.
McCollum, Edward
McCollum, William
McKnight, William D.
Mertz, John Douglas
Mishkin, David
Moose, John I.

Morgan, Martha
Mould, David C.
Mullins, Neil D.
Neaville, Gary A.
Nugent, Loyd
Panettiere, Frank J.
Pappas, John J.
Pearson, Richard N.
Pickens, James L.
Platt, Michael R.
Poemoceah, Kenneth M.
Puckett, Billy J.
Reese, Michael C.
Revard, Ronald
Ritz, Ralph C.
Rodkin, Richard S.
Rollow, John A.
Rolniak, Wallace A.
Springer, Dan J.
Steadman, Hunter M. Jr.
Stinnett, Charles H.
Stinnett, Scott G.
Stolzy, Sandra
Summerlin, William
Swaim, Terry J.
Swindell, William G.
Tate, Jeffrey
Treptow, Douglas
Turley, Jan T.
Waldon, Gene B.
Warren, Grier D.
Weaver, Donald D.
Weaver, Robert H.
Webb, William
Wilkerson, Danny
Youngblood, Thomas

Boone County

Abdelaal, Ali F.
Ashe, Barbara
Bell, Thomas Edward
Bennett, Joe D.
Brandon, Henry
Casey, Rick E.
Chambers, Carlton L. III
Chambers, Sue
Chu, Victor
Collins, Kenneth

Crider, James T.
Daniel, Charles D.
Dunaway, Geoffrey
Ferguson, Noel F.
Fowler, Ross E.
Garland, William J. Jr.
Helmling, Robert L.
Hope, John M.
Kim, Hyewon
Klepper, Charles R.
Langston, James David
Langston, Robert H.
Langston, Thomas
Ledbetter, Charles A.
Leslie, Thomas S.
Maes, Stephen R.
Mahoney, Paul L. Jr.
Maris, Mahlon O.
Mears, Bill
Miller, Robert Jr.
Padilla, Jose S. Jr.
Reese, Ronald R.
Rozeboom, Victor A.
Scroggie, Daniel J.
Scroggins, Sam J.
Shapter, Janet B.
Smith, H. Van
Van Ore, Stevan Michael
Vowell, Don R.
Welch, William P.
Williams, Rhys A.

Bradley County

Chambers, F. David
Coyle, Pamela
Foscue, David
Marsh, James W.
Pennington, Kerry F.
Wharton, Joe H.
Wynne, George F.

Carroll County

Card, Shannon R.
Flake, William K.
Horton, Charles
Kresse, Gregory
Martinson, Alice
McAlister, Robin
Nash, John R.
Spann, Eric G.
Spurgin, Randal Truman
Stensby, Harold F.
Taylor, Richard L.

Wallace, Oliver
Warner, Milo N.

Chicot County

Burge, John P.
Kronfol, Ned
Mansour, George
Russell, John R.
Smith, Major E.
Thomas, H. W.
Tuangsithtanon, T.
Tvedten, Tom
Weaver, William J.
Wilson, Thomas C.

Clark County

Anderson, P. R.
Balay, John W.
Bryan, Yvon F.
Dorman, Robert A.
Elkins, John S.
Ferrari, Victor J. Jr.
Ford, Michael Ray
Fullerton, John C. III
Hagood, Noland Jr.
Jansen, Mark
Kluck, Carl Jr.
Lowry, James L.
McLeod, Kevin
Peeples, George R.
Taylor, George D.
Teed, Frank S.

Cleburne County

Ashabranner, Wesley J.
Baldridge, Max
Barnett, James C.
Barnett, Michael
Beasley, Harold
Bivins, Franklin Jr.
Quinn, Cynthia D.
Sharp, Jan
Thomas, Jerry L.
Vaughan, G. Lee

Columbia County

Alexander, John E. Sr.
Alexander, John E. Jr.
Baldwin, Ronald L.
Evans, Matthew L.
Farmer, John M.
Griffin, Rodney L.
Hester, Joe D.

Hunter, Robert W. Jr.
Kelley, Charles W.
McMahen, H. Scott
Murphy, Fred Y.
Parkman, Robert L. Jr.
Pullig, Thomas A.
Roberts, Franklin D.
Ruff, John L.
Strange, Vance M.
Walker, Jack T.

Conway County

Duensing, Theodore
Hickey, Thomas H.
Lipsmeyer, Keith M.
Owens, Gastor B.
Wells, Charles F.

Craighead-Poinsett County

Alston, Herman D.
Ameika, James A.
Aston, J. Kenneth
Awar, Ziad
Ball, John
Barker, Charles
Basinger, James W.
Beck, M. Lowery
Berry, Donald M.
Berry, Michael
Blachly, Ronald J.
Blaylock, Jerry D.
Bodeker, Larry J.
Bolt, Michael E.
Boyd, John T.
Braden, Terence P. III
Brown, Dennis R.
Brown, Mark C.
Bryan, James Earl
Buckner, John H.
Burns, Richard G.
Burns, Robert
Camp, Michael
Carpenter, Kennan
Casanova, Robert Jr.
Chediak, Gregory
Clopton, Owen H. Jr.
Cohen, Evan Scott
Cohen, Jeffrey O.
Cohen, Robert S.
Cook, John
Cranfill, Ben
Cranfill, General L. III

Crawley, Michael E.
Deem, Brent S.
Degges, Russell D.
Dickson, Glenn E.
Dow, J. Timothy
Duke, Billy L. II
Dunn, Charles C.
Eddington, William R.
Edwards, Carl B.
Emerson, Steven
Felts, Larry S.
Fields, L. Brad
Foote, John W.
Forestiere, A. J.
Garner, William L.
George, F. Joseph
Golden, Stephen C.
Gossett, Clarence E.
Goza, Gary R.
Green, Terri
Green, William
Guinn, Donald R.
Hackbarth, Mark A.
Hall, Ray H. Jr.
Harvey, Bryan
Hiers, Connie L.
Hightower, Michael D.
Hill, Roger D.
Hogue, Ernest L.
Houchin, Vonda
Hubbard, William S.
Hurst, William
Isaacson, Michael L.
James, Frank M.
Jennings, R. Duke
Jiu, John B.
Johnson, John A.
Johnson, Larry H.
Johnson, Roehl W.
Jones, K. Bruce
Jones, R. J.
Keisker, Henry W.
Kemp, Charles E.
Kostick, Richard A.
Kroe, Donald J.
Kyle, Richard
Landry, Robert J.
Lassonde, Robert G.
Lawrence, Robert O. Jr.
Ledbetter, Joseph W.
Lepore, Diane G.
Levinson, Mark
Lewis, David M.
Lunde, Stephen P.

Luter, Dennis W.
 Lynch, John
 Mackey, Michael
 Maglothlin, Douglas L.
 Mahon, Larry E.
 Marzewski, David
 McDaniel, Craig A.
 McKee, Sanders
 Modelevsky, Aaron C.
 Montgomery, Earl W.
 Moseley, Claiborne II.
 Nash, Jerry
 Nixon, D. Allen Jr.
 Owen, Kip
 Owens, Ben Jr.
 Parten, Dennis
 Peacock, Loverd
 Porter, Revel D.
 Price, Edwin F.
 Price, Herbert H. III
 Price, Joel A.
 Pyle, David
 Ragland, Darrell G.
 Rainwater, W. T.
 Rauls, Stephen R.
 Ricca, Dallie
 Ricca, Gregory F.
 Richards, Fraser M.
 Roberts, Randy D.
 Robinette, James M.
 Rogers, James F.
 Rusher, Albert H. Jr.
 Sales, Joseph Hugh
 Sanders, James W.
 Sapiro, Gary S.
 Sauer, Curtis
 Savage, Patrick Joseph
 Schrantz, James L.
 Scribe, Ladd J.
 Scroggin, Carroll D. Jr.
 Shanlever, William T.
 Sifford, Mark
 Silas, David
 Skaug, Phyllis
 Skaug, Warren A.
 Smith, Floyd A. Jr.
 Smith, Michael J.
 Smith, Vestal B.
 Sneed, Jane
 Snodgrass, Scot J.
 Sparks, Barrett
 St Clair, John T. Jr.
 Stainton, Joseph C.

Stainton, Robert M. Jr.
 Stallings, Joe H. Jr.
 Stank, Thomas M.
 Steffin, Morris
 Stevenson, Richard
 Stidman, Jeff
 Stripling, Mark C.
 Stroope, Henry F.
 Stubblefield, Sandra
 Stubblefield, William
 Swingle, Charles G.
 Taylor, Robert D.
 Tedder, Barry C.
 Tedder, Michael E.
 Thomas, Gary A.
 Tidwell, Kenneth Jr.
 Tonymon, Kenneth
 Tuck, Rebecca
 Vines, Troy Alan
 Vollman, Don B. Jr.
 Walker, Meredith M.
 Warner, Robert L. Jr.
 White, Anthony T.
 Wiggins, H. Lynn
 Williams, Anthony
 Williams, E. Walden
 Wilson, Joe T. Jr.
 Wisdom, Garland Durwood
 Woloszyn, John
 Wood, Mark Cole
 Woodruff, Stephen O.
 Woodward, Gary W.
 Yates, Robert L.
 Young, Richard S.
 Young, William C. Jr.

Crawford County

Darden, Lester R.
 Delk, John II
 Doyle, Edward
 Edds, Millard C.
 Edwards, Henry N.
 Flanagan, Mary Clare
 Floyd, Rebecca
 Hefner, David P.
 Jennings, Charles A.
 Mason, Joe N.
 Ross, R. Wendell
 Sasser, L. Gordon III
 Schlabach, Ronald D.
 Shearer, Francis E. #
 Sills, D. Bart
 Travis, A. Lawrence

Crittenden County

Adler, Justin Jr.
 Arnold, Sidney W.
 Barr, Marian
 Bryant, G. Edward Jr.
 Clemons, Mark
 Deneke, Milton D.
 Evans, Loraine J.
 Ferguson, Scott
 Ferguson, T. Murray
 Ford, Robert C. Jr.
 Greene, Robert W. Jr.
 Hernandez, Jacinto
 Hodges, John M.
 Huffstutter, Paul J.
 Jay, Gilbert D. III
 Kaplan, Bertram
 Kennedy, Keith B.
 Khan, Mohammed B.
 L'Heureux, Guy J.
 Meredith, Samuel G. Jr.
 Miller, James L.
 Murray, Ian F.
 Nadeau, Kenneth R.
 Peeples, Chester W. Jr.
 Peeples, Guy Langley
 Pierce, Trent P.
 Rudorfer, Bennett Lewis
 Ruiz, Julio P.
 Schoettle, Glenn P.
 Schoettle, Steve P.
 Shrader, Floyd R.
 Smith, Bedford W.
 Smith, Mark M.
 Utley, L. Thomas
 Wah, John
 Webb, Dan W.
 Westmoreland, Daniel
 Wright, William J.

Cross County

Beaton, James
 Beaton, Kenneth E.
 Bethell, Robert D.
 Burks, Willard G.
 Crain, Vance J.
 Hayes, Robert A. Jr.
 Jacobs, James R.

Dallas County

Delamore, John H.
 Howard, Don

Nutt, Hugh A.
 Spears, Robert S.

Desha County

Asemota, Steve
 Go, Peter Kong Hua
 Harris, Howard R.
 Hoagland, Robert A. #
 Masquil, Filipe
 Prosser, Robert L. III
 Scott, Robert
 Turney, Lonnie R.
 Young, James E.

Drew County

Burns, Robert E.
 Busby, Arlee K.
 Maxwell, Ralph M.
 McKiever, William R.
 Wallick, Paul A.
 Williams, William III
 Wilson, Harold F.

Faulkner County

Archer, Charles A. Jr. #
 Arnold, Robert
 Beasley, Margaret D.
 Benafield, Robert B.
 Bowlin, Randal
 Bowman, Gary
 Carter, D. Mike
 Clark, Robert L. Jr.
 Collins, Mitchell L.
 Connaughton, Michael A.
 Cummins, J. Craig
 Daniel, Sam V.
 Dixon, Jerry W.
 Dodge, Ben
 Furlow, William C.
 Garrison, James S.
 Ghormley, J. Tod
 Gordy, L. Fred Jr.
 Hendrickson, Richard O. Jr.
 Hudson, Thomas F. III
 Jackson, Carole
 Landberg, Karl H.
 Magie, Jimmie J.
 Martin, David A.
 McCarron, Robert
 McChristian, Paul L.
 Murphy, Kenneth
 Raney, Herschel D. Jr.
 Roberts, Thomas

Ross, Rex W.
Shirley, David C.
Smith, John D.
Smith, Lander A.
Stancil, Vicki
Stone, Phillip
Throneberry, Bart
Wright, Gary David

Franklin County

Gibbons, David L.
Lachowsky, John
Long, C. C.
Smith, John C.
Wilson, Robert
Zabab, Hussein

Garland County

Arthur, James M.
Aspell, Robert
Atherton, Lee G.
Bandy, Preston R.
Bennett, Keith
Bodemann, Diane
Bodemann, Donald R.
Bodemann, Michael C.
Bodemann, Stephen L.
Bohnen, Loren O.
Boos, Donald Jr.
Borg, Robert V.
Borland, Judy
Bracken, Ronald J.
Braley, Richard E.
Braun, James R.
Brunner, John H.
Bumpas, Timothy F.
Burton, Frank M.
Burton, James F.
Campbell, James W.
Carpenter, James
Cates, Jack A.
Cenac, Joseph W. Jr.
Cunningham, Mark
Cupp, Cecil W. III
Cyrus, Scott S.
Davis, Kristie L.
Davis, Sheryl L.
Dodson, John W. Jr.
Dolan, Patrick III
Dunn, Richard W.
Eisele, W. Martin
English, P. Timothy
Finch, Richard R.

Fine, B.D. Jr.
Fore, Robert W.
Fotioo, George J.
French, James H.
Gammill, Todd
Gardial, J. Richard
Gardner, James L.
Gerber, Allen D.
Gocio, Allan C.
Griffin, James E.
Haggard, John L.
Hale, Kevin D.
Harper, Edwin L.
Headrick, Daniel
Hechanova, D. M. Jr.
Heinemann, Fred M.
Henson, Clinton H.
Hickman, Michael P.
Hill, Robert L.
Hitt, W. C. Jr.
Hollis, Thomas H.
Howe, H. Joe
Hughes, James A.
Hulsey, Matthew
Humphreys, Robert P.
Irwin, William G.
Jackson, Brian D.
Jackson, Haynes G.
Jackson, Haynes G. Jr.
James, Janeen
Jayaraman, K. K.
Jayaraman, Vilasini D.
Jayasundera, Naomal S.
Jennings, Larry B.
Johnson, Paulette S.
Johnson, Robert D.
Johnston, Gaither C.
Kaler, Ron A.
Keadle, William R.
Kincheloe, A. Dale
King, Leeman H. #
Kleinhenz, Robert W.
Klugh, Walter G. Jr.
Koehn, Martin A.
Lane, Charles S. III
Larey, Mark E.
Larrison, Charles A.
LeMay, Thomas B.
Lee, William R.
Lennon, Yates
Lyles, Fred
Martin, Jana
Maruthur, Gopakumar

Mashburn, William R.
McCrary, Robert F. Jr.
McFarland, Louis R.
McMahan, James
Meek, Gary N.
Munos, Louis R.
Olive, Robert Jr.
Pai, Balakrishna
Pappas, Deno P.
Parkerson, Cecil W.
Peeples, Raymond E.
Pellegrino, Richard
Plaza, Jesus' A.
Powell, Brenda
Queen, George P.
Rainwater, W. Sloan
Rayburn, John
Reddy, Prabhakara K.
Robbins, Mark
Robert, Jon M.
Roda, Ferdinand T.
Rosenzweig, Joseph L.
Russell, Mark
Sanders, Hallman E.
Seifert, Kenneth A.
Sharma, Bimlendra
Shelby, Eugene M.
Shroff, Rajesh K.
Simpson, John B.
Slaton, G. Don
Sloand, Timothy Peter
Smith, Bruce L. Jr.
Smith, John W.
Smith, Phillip L.
Sorrels, John W.
Sousan, Leo
Springer, Melvin R. Jr.
Springer, William Y.
Stecker, Elton H. Jr.
Stecker, Rheeta M.
Stough, D. Bluford III
Stough, Dow B. IV
Tanganun, Priscilla L.
Thomas, W. Al
Thompson, Thomas P. Jr.
Trieschmann, John W.
Tucker, R. Paul
Wallace, Thomas
Walley, Luther R.
Webb, Timothy
Woodward, Philip A.
Wright, Charles C.
Young, Michael J.

Grant County

Irvin, Jack M.
Paulk, Clyde D.
Winston, Scott D.

Greene-Clay County

Baker, Clark M.
Boggs, Dwight F.
Bonner, J. Darrell
Brown, Peggy J.
Cagle, Roger E.
Collier, George H. Jr.
Collier, Jon D.
Crow, Asa A.
Duckworth, Hillard R.
Fonticiella, Adalberto
Fonticiella, Aldo V.
Hardcastle, R. Lowell
Hazzard, Marion P.
Hobby, George A.
Jackson, Ron
Kemp, Clarence
Laffoon, Scott L.
Lawson, J. Larry
Martin, Richard O.
Mitchell, Bennie E.
Morrison, Jimmy J.
Muse, Jerry L.
Page, Billie C.
Perry, Evelyn S.
Perry, John K.
Purcell, Donald I.
Rollins, William
Sellars, John R.
Shedd, Leonus L.
Sheridan, James G.
Shotts, C. Mack Jr.
Shotts, Vern Ann
Smith, Norman E.
Watson, Samuel D.
White, Robert B.
Williams, Dwight M.
Williams, Jacob M.

Hempstead County

Finley, George
Harris, Lowell O.
Holt, Forney G.
McKenzie, Jim
Mercer, Lloyd
Stevens, David G.
Wright, George H.

Hot Spring County

Berry, Frederick B.
Bollen, A. Ray
Brashears, Larry B.
Burton, Bruce K.
Cobb, Russell W.
Ellis, C. Randolph
Highsmith, Vivian F.
Kersh, N. B.
Lumb, John C.
Peters, Claude F.
Tilley, Absalom
Vaughan, John A.
White, Bruce A.
White, Robert H.

Howard-Pike County

Dunn, Robert
Floyd, Mark A.
Gorrell, Robert J. Jr.
Gullett, A. Dale
Hopson, Deanna
Humphreys, T. J. Jr.
King, Joe D.
Martinazzo-Dunn, Anna
Peebles, Samuel W.
Sayre, John
Shefa, Bobbie
Sykes, Robert
Turbeville, James O.
Ward, Hiram T.
White, Phillip L.

Independence County

Alexander, William Steve
Allen, James D.
Angel, Jeff D.
Baker, John R.
Baker, Robert V.
Bates, Ronald J.
Bess, Lloyd G.
Brown, Hunter Lee
Brown, Verona T.
Cummins, Thomas
Davidson, Andy
Davidson, Dennis O.
Fowler, William
Fulbright, Thomas
Goodin, William H. Jr.
Hays, Sarah F.
Jeffrey, Jay R.
Johnson, Deborah A.
Jones, Edward J.

Jones, Edward T.
Kearns, Harry
Ketz, Wesley J.
Lambert, John S.
Lytle, Jim E.
McClain, Charles M. Jr.
Melton, Clinton G.
Moody, Lackey G.
Neaville, Gregory
O'Brien, Marcus D.
Piediscalzi, Nicholas
Scott, John G.
Simpson, Ronald
Slaughter, Bob L.
Sloan, Fredric J. II
Stalker, James M.
Sutterfield, Terry F.
Taylor, Chaney W.
Taylor, Charles A.
Van Grouw, Richard
Waldrip, William J. III
Walton, Robert B.
Webster, Russell P.
Williams, Robin C.
Winters, John C. #
Zini, James E.

Jackson County

Ashley, John D. Jr.
Carney, J. W.
Chauhan, Mufiz A.
Dudley, Guilford M. III
Falwell, K. Wade
Frankum, Jerry M. Jr.
Fremming, Bret G.
Green, Roger L.
Hergenroeder, Paul J.
Hunt, Randall Evan
Jackson, Jabez Fenton Jr.
Junkin, A. Bruce
Montgomery, F. Renee'
Poon, Hon K.
Reynolds, Roland C.
Snodgrass, Phillip A.
Young, Jack S. III

Jefferson County

Alexander, Lester T.
Ancalmo, Nelson
Anderson, Charles W.
Armstrong, Simmie Jr.
Atkinson, Evangelina
Atkinson, Robbie

Atnip, Gwyn
Attwood, H.
Baho, Haysam
Bell, Carl H. Jr.
Blackwell, Banks
Bracy, Calvin M.
Brooks, R. Teryl Jr.
Broughton, Stephen A.
Bruton, J. Lewis
Buckley, J. Wayne
Busby, John
Butler, Robert C.
Campbell, James C. Jr.
Carlton, Irvin L.
Cheek, Ben H.
Clark, Charles A.
Courtney, Willis Jr.
Crenshaw, John
Davis, Charles M.
Davis, Paul W.
Dedman, John D.
Del Giudice, Jose A.
Deneke, William
Dharamsey, Shabbir A.
Duckworth, Thomas S.
Fendley, Ann E.
Fendley, Claude E.
Fendley, Herbert F.
Flowers, Martha A.
Forestiere, Lee A.
Freeman, William H.
Frigon, Jacquelyn S.
Green, Horace L.
Gullett, Robert R. Jr.
Henderson, Francis M.
Herzog, John L.
Hughes, L. Milton
Hussain, Shafqat
Hutchison, E. L.
Hyman, Carl E.
Irwin, Raymond A. Jr.
Jacks, David C.
Jacks, Dennis
James, William J.
Jenkins, Bobby
Jenkins, Mary Ellen
Johnson, Horace
Jones, James III
Joseph, Aubrey S.
Justiss, Richard D.
Khan, Mahmood A.
King, Yum Y.
Langston, Lloyd G.

Ligon, Ralph E.
Lim, William N.
Lindsey, James A.
Lum, Don
Lupo, David A.
Lytle, John O.
Mabry, Charles D.
Malik, Bilal
Malik, Shamim A.
Marcus, Herschel
McDonald, Robert L.
McFarland, Mike S.
Mehta, Shyam P.
Meredith, William R.
Miller, Donald L.
Milligan, Monte C.
Mohiuddin, Mohammed J.
Morris, Harold J.
Mulingtapang, Reynaldo F.
Nagappa, Champa
Newan, Michael
Nixon, David T.
Nixon, William R.
Nuckolls, J. William
Orange, Betty L.
Pearce, Malcolm B.
Pierce, J. R. Jr.
Pierce, Reid
Pierce, Ruston Y.
Pollard, J. Alan
Quimosing, Estelita M.
Redman, Anna T.
Reid, Lloyene B.
Rhode, Marvin C.
Roaf, Sterling A.
Roberson, George V. Jr.
Robinette, Joseph S. #
Robinson, Paul F.
Rogers, Henry L.
Rook, Michael J.
Ross, Robert L.
Rowe, David E.
Samuel, Ferdinand K.
Shorts, Stephen D.
Simmons, Calvin R.
Simpson, P. B. Jr.
Smith, Paul L.
Stern, Howard S.
Sullenberger, A. G.
Suphan, Neema A.
Townsend, Thomas E.
Tracy, C. Clyde
Trice, James

Walajahi, Fawad H.
Washington, Erma
Wilkins, Walter J. Jr.
Wineland, Herbert L.
Woods, Jerrye
Worrell, Aubrey M. Jr.

Johnson County

Goodman, James David
McKelvey, Richard
Pennington, Donald H.
Shrigley, Guy P.

Lafayette County

Harbin, Bradley
Lee, Willie J.

Lawrence County

Hughes, Joe E.
Joseph, Ralph F.
Lancaster, Ted S.
Quevillon, Robert D.
Spades, Sebastian A. III
Troxel, Roger

Lee County

Balke, Susan W.
Gray, Dwight W.
Ly, Duong N.
Waddy, Leon Jr.

Little River County

Armstrong, James
Peacock, Norman W. Jr.
Shelton, Joseph Jr.

Logan County

Alexander, Eugene
Borklund, Maurice K.
Buckley, Douglas A.
Daniel, William R.
Enns, Wayne P.
Harbison, James D.
Hasan, Shahzad
Roberts, William J.
Ulrich, Guy
Williams, John R.

Lonoke County

Abrams, Joe A.
Anderson, Leslie
Braswell, Thomas

Chapman, Jerry C.
Elam, Garrett
Gartman, Joseph F. #
Holmes, Byron E.
Inman, Fred C. Jr.
Rochelle, Joe
Schumann, Gerald M.
Shurley, Floyd Jr.
Thomason, Steven L.
Thorn, Garland M. Jr.

Miller County

Alkire, Carey
Alston, Thomas
Andrews, A. E. Jr.
Barnes, Walter C. Jr.
Burroughs, James C.
Campanini, D. Scott
Carlisle, David L.
Collins, Stanley
Cutler, Otis
DeHaan, Jeffrey T.
Dildy, Edwin V. Jr.
Ditsch, Craig E.
Dodd, N. Leland
Dodge, John M.
Duncan, Donald L.
Eichler, Edward A. Jr.
Ford, John Suffer
Fournier, Donald C.
Gabbie, Mark
Gocio, John C.
Graham, John
Green, R. Clark
Griffin, Nancy
Hall, Eric E.
Hall, Jon D.
Hamilton, Marshall E.
Harrell, William B. Jr. #
Harris, C. Lynn
Hillis, Thomas M.
Hollingsworth, Charles E. II
Hughes, A. Keith
Jean, Alan B.
Jones, John W.
Joyce, F. E.
Keever, James E.
Kemp, Karlton H. #
Kittrell, James
Knowles, Stanley C.
Loe, Arlis W.
Lux, Christopher Lee
Mayo, Russell

McGinnis, Robert S. Sr.
Morris, Howard
Newton, Norris L. Sr.
Newton, Norris L. Jr.
Norris, John A.
Peckham, Richard W.
Peebles, Larry M.
Portis, Richard P.
Robbins, Joseph
Rountree, Glen A.
Royal, Jack L.
Sarrett, James
Shipp, G. Carl
Smith, Arnett D. Jr.
Solomon, J. Alan
Somerville, Patrick J.
Stringfellow, Jerry B.
Vereen, Lowell E.
Wade, Billy
Wilhelm, Frieda
Wren, Herbert B.
Wright, Mark
Wright, Nathan L.
Yarbrough, Charles P.
Young, Mitchell

Mississippi County

Abraham, Anes Wiley
Abramson, Lawrence
Bell, Mary C.
Biggerstaff, Jerry
Brock, Charles C. Jr.
Cullom, Sumner R.
Fairley, Eldon
Fergus, R. Scott
Grissom, David B.
Hall, Leslie
Haynes, Max G.
Hester, Karen Calaway
Hester, Richard
Hubener, Louis F.
Hudson, James H.
Husted, G. Scott
Jones, Herbert
Jones, Joe V.
Lin, Ching-Shan
Lowery, Russell
Osborne, Merrill J.
Pollock, George D.
Rhodes, Joseph
Rhodes, R. F. #
Rodman, T. N.
Russell, James D.

Shahriari, Sia
Shaneyfelt, E. A.
Smith, Ronald D.
Williams, John
Yao, Joseph

Monroe County

Campos, Amador
Collins, Linda
David, Neylon C. Jr.
Pham, Dac Tat
Pupsta, Benedict F.
Stone, Herd E. Jr.
Walker, Walter L.

Ouachita County

Alhariri, Mirfat
Braden, Lawrence F.
Crump, Mark
Daniel, William A.
Dedman, William D.
Floss, Robert
Fohn, Charles H.
Guthrie, James
Hout, Judson N.
Jameson, John B. Jr.
Kendall, Jerry R.
Martin, Dan
McFarland, Gale
Miller, John H.
Mosley, David
Nunnally, Robert H.
Ozment, L. V.
Sanders, Cal R.
Shrestha, Bal Narayan
Thorne, Arthur E.

Phillips County

Athota, Prasad J.
Barrow, John H. Jr.
Bell, L. J. Patrick
Bell, L. J. Patrick II
Berger, Alfred A.
Epstein, S. Mitchell
Faulkner, Henry N.
Frederick, William Ronald
Hall, Scott
Kirkman, C. M. T. #
McCarty, Charles P.
McCarty, Gordon E. Jr.
McDaniel, Marion A.
Michel, Harry
Miller, Robert D. Jr.

Paine, William T.
 Patton, Francis M.
 Rangaswami, Bharathi
 Rangaswami,
 Narayanaswami
 Sorsby, Stephen
 Tan, Benjamin
 Tucek, Ladd
 Tukivakala, P. Reddy
 Vasudevan, Kanaka
 Vasudevan, P.
 Winston, William II
 Wise, James E. Jr.

Polk County

Brown, David P.
 Finck, John Henry
 Fried, David D.
 Lochala, Richard
 McClard, Helen
 Mesko, John D.
 Rogers, Henry N. #
 Sosa, Humberto J.
 Tinnesz, Thomas
 Wood, John P.
 Wynn, Chester

Pope County

Ashcraft, Ted
 Austin, Nathan
 Bachman, David S.
 Barron, William G.
 Barton, A. Dale
 Battles, Larry D.
 Beavers, H. Kevin
 Bell, Linda O.
 Bell, Michael
 Bell, Robert A.
 Berner, Dennis W.
 Birum, Patricia J.
 Bradley, Stanley C.
 Brown, Charles H.
 Brown, William Bruce
 Burgess, James G.
 Callaway, Jody C.
 Carter, James M.
 Cloud, Joe A.
 Crouch, James Jr.
 Crumpler, Joe B. Jr.
 Cunningham, James A.
 Dunn, Donald L.
 Ferris, Craig A.
 Fraiss, Michael A.

Galloway, William W.
 Gately, Stanley
 Goodman, Robin Quinn
 Haines, Lynn
 Hale, Jeffrey
 Harden, V. Anthony
 Harrison, Rick
 Henderson, Vickie L.
 Hendren, Mike
 Henry, J. Arnold #
 Hill, Donald F.
 Hines, Cynthia C.
 Honghiran, Ted
 Jones, Charles Jr.
 Kerin, Douglas
 Killingsworth, Stephen M.
 King, John W.
 King, W. Ernest Jr.
 Kolb, James M. Jr.
 Kriesel, Ben J.
 Lawrence, Frank M.
 Lovell, Richard K. Sr.
 Lowrey, Douglas H.
 Lyford, Joe H. Jr.
 Malone, George E.
 Marshall, Glenn E.
 Massey, V. Rudolph
 Mauch, E. Jane
 May, Robert H. Jr.
 McCraw, Barry W.
 Monfee, Andrew M.
 Murphy, David S.
 Myers, J. Mark
 New, Kenneth O.
 Richison, George C.
 Rickey, Jean M.
 Riddell, C. Michael
 Riley, Don C.
 Robertson, William T.
 Soto, Sergio F.
 Stinnett, Thomas
 Stolz, Gerald A. Jr.
 Stone, Timothy
 Tapley, Thomas S.
 Teeter, Stanley D.
 Thurlby, W. Robert
 Turner, Finley P. II
 Turner, Kenneth B.
 White, Ronald
 Wilkins, Charles F. Jr.
 Williams, David M.
 Williams, Thomas C.
 Young, Sandra S.

Pulaski County

Abbott, William W.
 Abel, Lee C.
 Abraham, James H.
 Abraham, James H. III
 Ackerman, William
 Adametz, James
 Adametz, John
 Adametz, Kimberly
 Adams, Christopher
 Adamson, James
 Alexander, Albert S.
 Alford, T. Dale
 Allen, Durward Jr.
 Allen, E. Stewart
 Allen, John E. Jr.
 Alston, Phillip
 Amir, Jacob
 Aquino, Al
 Araoz, Carlos
 Archer, Robert L.
 Armstrong, Howard
 Arrington, Robert
 Astle, Hal
 Atha, Timothy C.
 Atkinson, William Jr.
 Baber, John C. Jr.
 Baber, John T.
 Backus, Joe T.
 Bailey, H. A. Ted Jr.
 Baker, Glen F.
 Baker, John W.
 Baker, Johnson
 Baldwin, Maxwell R.
 Baltz, Brad Patrick
 Barber, Jeffrey
 Barber, Laurie
 Barclay, David
 Bard, David S.
 Barger, Denver L.
 Barlow, Brian E.
 Barnes, C. Lowry
 Barnes, Reginald
 Barnes, Robert W.
 Barnett, David
 Barnett, Troy F.
 Barron, Edwin N. Jr.
 Bartnicke, Benjamin J.
 Barton, Gary
 Baskin, Barry
 Bates, Ramona
 Bates, Stephen
 Batres, Francisco

Bauer, F. Michael
 Bauer, Frank M. Jr.
 Bauman, David C.
 Bayliss, John M.
 Beadle, Beverly
 Bearden, James R.
 Beaton, J. Neal
 Beck, Joseph II.
 Becquet, Norbert J.
 Belknap, Melvin L.
 Bell, Rex H.
 Bennett, Eaton W.
 Bennett, F. Anthony Jr.
 Benton, William
 Berry, Robert L.
 Bevans, David W. Jr.
 Bienvenu, Gregory
 Bienvenu, Harold G. III.
 Bierle, Michael
 Billie, James
 Biondo, Raymond V.
 Birkett, Ian McRae
 Bishop, William B.
 Biton, Victor
 Bitzer, Lon
 Black, H. Thurston
 Blackshear, Jack L. Jr.
 Blankenship, William F.
 Blasier, R. Dale
 Boehm, Timothy
 Boellner, Samuel W.
 Boger, James E.
 Book, Lindy
 Boop, Frederick
 Boop, Warren C. Jr.
 Bornhofen, John H.
 Bost, Roger B.
 Bourne, David E.
 Bowen, W. Scott
 Bower, Charles M.
 Boyd, Charles M.
 Bozeman, Barbara J.
 Bradburn, Curry B. Jr.
 Bradford, J. David
 Bradley, Joe F.
 Brainard, Jay O.
 Bratton, Nita
 Bressinck, Renie E.
 Brewer, Robert
 Brewer, Thomas E.
 Brimberry, Ronald K.
 Brineman, John
 Brinkley, Roy A.

Brizzolara, A. J.	Chappell, Carol W.	Dixon, Keith A.	Gettys, Joseph M. Jr.
Brizzolara, John Paul	Cheairs, David B.	Dodd, Doyne	Gibbs, Mark
Broach, R. Fred	Cheairs, John T.	Doncer, Richard P.	Giblin, John M.
Broadwater, John Ralph Jr.	Chisholm, Dan P.	Doucet, Marlon J.	Gibson, Gordon L.
Brooks, Andrew	Choate, Robert B.	Douglas, Warren M.	Giglia, Anthony R. III
Brown, Michael	Christian, John D.	Downs, Ralph A.	Giles, Wilbur M.
Brown, Pamela S.	Christiansen, Stephen P.	Dungan, William T.	Gillespie, A. Tharp
Brown, Scott H.	Chudy, Amail	Dwyer, Gregory A.	Gilliam, David
Brown, Steven L.	Church, Marion M.	Eans, Thomas L.	Gist, Charles C.
Browning, Donald G.	Church, Michael	Easter, Rex M.	Glenn, Wayne B.
Browning, Stanley K.	Clark, J. Roger	Edge, Otis H.	Glidden, Michael L.
Brunson, Ashley	Clark, Richard B.	Edmiston, Frank G.	Glover, Lawson E. Jr.
Bryan, James W. IV	Clift, Steven A.	Eisenach, R. Jeffrey	Glover, W. Clyde
Buchanan, Francis R.	Clifton, Cliff	English, Jim	Golden, William E.
Buchanan, Gilbert A.	Clogston, Charles W.	Eudy, Sidney	Goldsmith, Geoffrey
Buchman, Joseph A.	Cobb, Jock S.	Evans, Billy	Gordon, Vida H. #
Buchman, Joseph K.	Cockrill, H. Howard Jr.	Evans, Samuel C.	Gosser, Bob L.
Bucolo, Anthony P.	Cogburn, Bob E.	Eyre, Byron L.	Goza, George M. Jr.
Buford, Joe L.	Colclasure, Joe B.	Farmer, Joseph F.	Granger, William III
Burger, Robert A.	Collins, David	Farque, Greg L.	Grant, Karen G.
Burnett, Hugh F.	Collins, Kevin J.	Farris, Guy R. Jr.	Green, Benny J.
Burnett, P. Susan	Cone, John	Fawcett, Deborah Dee	Greenway, C. Don
Burrow, Dennis R.	Cope, Michael	Fernandez, Agustin	Greer, G. Stephen
Butcher, Joan R.	Corbitt, Mary	Ferris, Ernest J.	Greutter, John E. Jr.
Byrum, Jerry	Cornell, Paul J.	Fewell, Ronald D.	Griebel, Jack A. Jr.
Cain, Thomas	Cosgrove, Kingsley W. Jr.	Fielder, Charles R.	Grimes, H. Austin
Calcote, Robert A.	Coussens, David M.	Fields, Patrick R.	Guard, Peggy K.
Calderon, Vincent Jr.	Crawford, Cary M.	Finan, Barre F.	Guevara, John
Calhoon, J. Dale	Crews, J. Travis	Fincher, Robert L.	Guggenheim, Frederick G.
Calhoun, Joseph D.	Crocker, Charles H.	Fiser, Martin	Guin, Jere D.
Calhoun, Richard A.	Cross, J. B.	Fiser, Robert H. Jr.	Gurley, Thomas D.
Calkins, Joe B. Jr.	Crow, Joe W.	Fiser, William P. Jr.	Hagans, James III
Campbell, Gilbert S.	Crow, R. Lewis Jr.	Fitzgerald, Charles	Hagler, James L.
Campbell, James W.	Crowell, Karen D.	Fitzhugh, A. Stuart	Hahn, Herbert
Campbell, Leah S.	Curtner, Byron D.	Flack, James V. Jr.	Hall, A. D.
Caplinger, Kelsy J. III	Darwin, William G.	Flaming, Jay	Hall, A. David
Capps, Dwight II	Daugherty, Joe D.	Flanigan, Stevenson	Hall, R. Whit
Carfagno, Jeffrey	Daugherty, John L.	Fletcher, Anthony	Hamilton, George Jr.
Carle, Scott W.	Davie, Melanie	Fletcher, Elizabeth D.	Hampton, John R. III
Carson, Layne E.	Davis, Glenn R.	Fletcher, Thomas M.	Hankins, Edwin III
Carter, Jerry L.	Davis, J. Lynn	Florez, James P.	Harber, Harley
Carttar, Charles	Dean, David M.	Floyd, Bill G.	Hardberger, R. E.
Caruthers, Carol	Dean, Gilbert O.	Foster, Gil	Hardin, Robert
Caruthers, Samuel B. Jr.	Deaton, C. William Jr.	Fraiser, Lacy P.	Hardin, Ronald D.
Casali, Robert E.	Deer, Philip J. Jr.	France, Gene L.	Harger, C. Harold
Cash, Darlene	Deer, Philip James III	Fraser, Eric A.	Hargrove, Joe L.
Casper, Robert B.	Dennis, James L.	Frazier, Cynthia	Harper, Gary E.
Casteel, Helen	DesLauriers, S. Killeen	Frazier, G. Thomas	Harrendorf, Cagle
Cathey, Janet	Dickins, John R. E.	Freeman, Diane	Harrington, Mariann
Cathey, Steven	Dickins, Robert D. Jr.	Fuller, C. Dale	Harris, Donald R.
Chai, Sandra	Dickson, D. Bud	Fuller, C. James III	Harris, T. Stuart
Chakales, Harold H.	Dillard, Daniel C.	Fulmer, John M.	Harris, W. Turner
Chandler, Billy M.	Diner, Bradley	Gardner, Guy F.	Harrison, A. Vale

Harrison, Roy E.	Hughes, Ronald D.	Kittler, Fred J.	Markland, Gary S.
Harrison, William	Hundley, John M. #	Kizziar, Jim C.	Marks, Stephen R.
Harshfield, David Lee Jr.	Hundley, Randal F.	Klein, E. F. 'Bud' Jr.	Martin, Kenneth A.
Hart, Thomas M.	Hurlbut, Kimberly	Klimberg, V. Suzanne	Martin, Richard H.
Harter, Scott	Hutchins, Steven W.	Knott, Patricia A.	Marvin, Peter
Hathcock, Stephen A.	Hutson, Harold G.	Knox, Michael F.	Mason, J. Zachary
Hauer-Jensen, Martin	Jackson, J. Presley	Kolb, Agnes J.	Mason, William L.
Hawley, Harold B.	Jackson, Thomas	Kolb, David	Matchett, W. Jean
Hayden, William F.	Jansen, G. Thomas	Kolb, W. Payton	Matthews, Joseph W.
Hayes, J. Harry Jr.	Jefferson, Terry	Koonce, Thomas W.	McAdoo, Hosea W. Jr.
Hayes, Richard L.	Johnson, Anthony D.	Kovaleski, Thomas M.	McCarthy, Richard E.
Hayes, Sidney P.	Johnson, B. Richard	Kozlowski, Karen J.	McConnell, John D.
Haynes, W. Ducote	Johnson, Ben D.	Kramm, Paul C.	McCoy, Julia M.
Headstream, James W.	Johnson, Carl	Krulin, Gregory S.	McCracken, Gail Ann
Hearnsberger, H. Graves III	Johnson, Dianne Flowers	Kumpuris, Andrew G.	McCracken, John
Hearnsberger, Henry G. Jr.	Johnson, Henry D.	Kumpuris, Dean	McCrary, George A.
Hearnsberger, John E.	Johnson, M. Bruce	Kumpuris, Frank G.	McCutcheon, Frank B. Jr.
Hedges, Harold IV.	Johnson, Philip H.	Kyser, J. Floyd	McDonald, James E.
Hedges, Harold H.	Johnston, Dale E.	Laakman, Robert W.	McDonald, Judy
Hefley, Bill F.	Johnston, Kenneth	Lambert, Robert A.	McGowan, Robert Jr.
Hefley, William Jr.	Jones, Eugene	Landers, James H.	McGrew, Robert N.
Henker, Fred O. III	Jones, Gail Reede	Landgren, Robert C.	McKelvey, K. David
Henry, C. Reid Jr.	Jones, Garry L.	Lane, John W.	McKinney, Carl
Henry, Charles R. Sr.	Jones, John C.	Lang, Nicholas P.	McKinnon, L. Jane
Henry, D. Andrew	Jones, Kathleen C.	Langford, Timothy	McKnight, C. Allen
Henry, G. Michael	Jones, Robert D.	Lasner, Jay E.	McLeane, Mark
Henry, G. Morrison	Jones, Roy Steven	Lawson, William B.	McMahon, Robert M.
Henry, J. Charles	Jones, S. Michael	Lehmann, Lance J.	McMillan, James A.
Henry, J. Forrest Jr.	Jones, William N.	Lehmborg, Robert W.	McMillin, F. Lamar Sr.
Henry, Richard Y.	Jordan, F. Richard	Leibovich, Marvin	McNair, James R.
Henry, Robert L. Jr. #	Jordan, Randy A.	Leithiser, Richard Jr.	McNee, Valerie
Henry, William T.	Joseph, Ralph F. II	Leonard, Donald G.	Meacham, Donald F.
Henson, Gregory N.	Joseph, William Frank	Leou, Frank J.	Meador, Annette Parker
Herbert, R. Wayne	Jouett, W. Ray	Lewis, Derek	Meadors, Frederick
Herron, Jerry M.	Joyce, John W.	Lile, Henry A.	Medlock, Rickey D.
Herron, John T. #	Junkin, Ruth H.	Lincoln, Ben M.	Mehta, Madhu
Hickey, Joseph P.	Kaemmerling, Raymond E.	Lipke, Jay M.	Mellor, Roy II
Hicks, David C.	Kahn, Alfred Jr.	Loebl, Edward C.	Mendelsohn, Lawrence A.
Hicks, David L.	Kane, James J.	Logan, Charles W.	Metrailler, James A.
Hixson, Marcia Lynn	Keeran, Michael G.	Love, Tommy L. Jr.	Metzer, W. Steve
Hodges, J. Timothy	Kellar, Stanley L.	Lowe, Betty A.	Meziere, Tom
Hodges, Steven C.	Keller, Alfred W.	Lucy, Dennis D. Jr.	Miers, Jane F.
Hoffmann, Thomas H.	Keller, Kevin	Ludwig, Frank R.	Miles, David A.
Holland, Jay D.	Kelly, Karen	Luttrell, Rex E.	Miller, Forrest B. Jr.
Holloway, J. Douglas	Kennedy, Charles H.	Lyons, Virgle E. Jr.	Miller, Raymond P. Sr.
Holt, Stephen	Kennedy, Eleanor E.	Mabrey, William	Milner, E. L.
Holton, Jerry C.	Kennedy, H. Frazier	Magie, Stephen K.	Mitchell, George K.
Hough, Aubrey J. Jr.	Ketcham, Jeffrey	Mallory, John A.	Mizell, Philip
Houk, Richard	Key, J. Michael	Maloney, F. Patrick	Mizell, Walter S.
Houston, Samuel	Khan, Shagufta P.	Malott, Jerry D.	Moffett, T. Robert Jr.
Howell, Coburn S. Jr.	Kilgore, Reed W.	Maners, Ann	Money, Wandal D.
Howell, Marsha T.	King, Michael T.	Mann, R. Jerry	Montanez, Josue
Hudec, Regina	King, W. David	Marable, Charles T.	Mooney, Donald K.

Moore, Burton A.	Parmley, Tim	Rosenbaum, Carl A.	Sloan, Fay M.
Moore, J. Malcolm Jr.	Parnell, Clifton L. III	Ross, Ashley Sloan	Smart, Douglas F.
Moore, Michael	Paulus, Thomas E.	Ross, Cynthia	Smelz, Johnny
Moore, Rex N.	Pearce, Charles E.	Ross, Robert W.	Smith, Aubrey C.
Moore, Robert B.	Peeples, R. Earl	Ross, Robin	Smith, Charles W. Jr.
Moore, Thomas	Peters, John E.	Ross, S. William	Smith, David E.
Morris, Barbara	Peters, Phillip J.	Rounsaville, Harry L.	Smith, Douglas B.
Morris, W. Dale	Petrash, Anton 'Tony'	Roy, F. Hampton	Smith, G. Richard Jr.
Morrison, Debra F.	Petrus, Gary M.	Ruggles, Dwayne L.	Smith, James L.
Morse, James C.	Petursson, Gissur J.	Runyan, William A.	Smith, Purcell Jr.
Morton, William J.	Pevahouse, Joe	Russell, James B.	Smith, Thomas J.
Mulhollan, James S.	Phillips, Charles E.	Rutledge, William L.	Smith, Thomas W.
Mumme, David	Phillips, Hannah	Ryals, Rickey O.	Smith, Tom
Murphy, Bruce	Pierce, William	Saer, Edward H. III	Smith, Vestal B. Jr.
Murphy, James E. Jr.	Pike, John D.	Safman, Bruce L.	Snyder, Victor F.
Murphy, Jeanne	Pledger, Norman R.	Salmeron, Manuel	Somers, A. Jack
Murphy, Joseph	Pollard, Arlee E.	Santoro, Ian H.	Sorrells, R. Barry
Murphy, Randolph	Pollock, Michael Marion	Satre, Richard W.	Sotomora, Ricardo F.
Murphy, Robert	Pope, David	Schellhase, Dennis E.	Squire, Arthur E. Jr.
Murphy, Tena	Pope, Norton A.	Schlesinger, Scott Michael	St Amour, Thomas E.
Nagel, Fred G.	Porter, Robert Jr.	Schlicht, Lisa	Stallings, James Walt
Nash, John C.	Potts, Jerry L.	Schock, Charles C.	Stanford, Royce Allan Jr.
Nelson, Alvah J. III	Power, Robert C.	Schratz, Bruce E.	Stanley, Joe P.
Nelson, Carl L.	Prather, Jerry L.	Schroeder, George T.	Stanley, Robert
Nestrud, Richard M.	Pringos, Andrew A.	Schultz, John C.	Steele, William L.
Newbern, David	Purdy, Harold D. #	Schutz, Michael J.	Stefans, Vikki Ann
Newsom, Jon Kirby	Pyle, Hoyte R. Jr.	Schwander, L. Howard	Stern, Scott Jeffrey
Newton, Fred E.	Quirk, J. Gerald	Schwankhaus, John D.	Sternberg, Jack J.
Nix, Richard A.	Rahman, Holly	Scott, Don I.	Stewart, Daryl
Nokes, Steven	Ransom, John M.	Scruggs, Jan W.	Stewart, Marguerite R.
Nolen, James E.	Rapp, Richard J.	Searcy, Robert M.	Stewart, Tracy D.
Norris, Lloyd P.	Raque, Carl J.	Seguin-Calderon, Rosa Elia	Stokes, B. Douglas
Norton, George A.	Ray, V. Gail	Seibert, Joanna J.	Storeygard, Alan R.
Norton, Joseph A.	Rector, Nancy F.	Seibert, Robert	Stotts, John R.
Nowlin, James Bill	Reding, David L.	Selakovich, Walter G.	Stout, Kimber
Nugent, Richard	Redman, John F.	Sessions, Louis II	Strauss, Mark
Oates, Gordon P.	Reed, Ewing C. Jr.	Sheppard, Joseph	Stringer, Warren
Oddson, Terrence A.	Reese, William G.	Shock, John P.	Strode, Steven W.
Oglesby, Walter R.	Reid, Gene W.	Short, Harold K.	Stroope, George F.
Osam, Patrick N.	Rommel, Raymond	Shotts, Joseph	Studdard, James D.
Osteen, Paul	Rice, Charles	Shuffield, James	Sturdivant, Stephen
Overacre, Robert	Rice, James Curtis	Silvoso, Gerald R.	Suen, James
Owen, Richard Jr.	Rice, Robert L.	Simmons, Orman W.	Sulieman, J. Samir
Owings, Debra	Riddle, John F. Jr.	Sims, James M.	Sullivan, Charles D.
Owings, Richard	Riley, William H.	Singer, Peter	Sullivan, Jan R.
Ozment, Kerry	Ritchie, Robert Ross	Singleton, L. Gene	Sundermann, Richard H.
Padberg, Frank T.	Robbins, Kenneth	Sinor, Elicia	Swindoll, Bryant S. #
Paddock, George	Roberson, Michael C.	Sipes, Frank M.	Tahiri, Abdalla A.
Padilla, Fernando	Roberts, Kevin	Skokos, C. Kemp	Talbert, Gary Eugene
Pahls, Wendell Lee	Rodgers, C. Dudley	Slater, John G. Jr.	Talbert, Michael L.
Pappas, James J.	Rodgers, Charles H.	Slaven, John E.	Tamas, David E.
Parker, J. Mayne	Rogers, Charles Jr.	Slayden, John E.	Tanner, James A.
Parkhurst, James	Rooney, Thomas P.	Sloan, Eugene E.	Taylor, David R.

Taylor, Eugene H.
 Tedford, John G.
 Texter, E. Clinton Jr. #
 Tharp, John G.
 Thomas, A. Henry
 Thomas, Peter O.
 Thompson, S. Berry Jr.
 Thompson, Steven M.
 Thomsen Hall, Kathleen
 Thorn, G. Max
 Tilley, Steve
 Tobler, H. Gareth
 Tolleson, Claudia
 Towbin, Eugene J.
 Tracy, Phillip A.
 Trantum, Bill L.
 Tressler, Samuel D. III
 Trigg, Laura
 Trussell, Thomas W.
 Tseng, Jyi-Ming
 Tucker, R. Stephen
 Tucker, W. Everett
 Valentine, Robert G. Jr.
 Van Der Velden, Elaine M.
 Van Zandt, Janelle
 Vaughter, W. Roger
 Velez, L. Duane
 Vinsant, Kurtis
 Vogel, Robert G.
 Wade, William I. Jr.
 Wagoner, Jack
 Walker, Lee
 Walker, Ronald
 Walt, James R.
 Waner, Milton
 Ward, Harry P.
 Ward, Thomas
 Warford, Walton R.
 Warren, William Jr.
 Watkins, Charles J.
 Watkins, John Jr.
 Watkins, John G. III
 Watkins, Julia
 Watkins, Larry S.
 Watson, C. Robert #
 Watson, Daniel W.
 Watson, Vye B.
 Weber, Edward R.
 Weber, James R.
 Weber, Michael
 Weiss, David W.
 Weiss, Gerald N.
 Welch, Samuel Bradley

Wellborn, James C. Jr.
 Wellons, James A. Jr.
 Wende, Raymond A.
 Wenger, Carl E.
 Westbrook, Kent C.
 Westbrook, September
 Westerfield, Frank M. Jr.
 White, Oba B.
 Whiteside-Michel, Julia
 Wilkes, Elbert H.
 Wilkes, T. David I.
 Williams, Alonzo D.
 Williams, C. David
 Williams, G. Doyne Jr.
 Williams, Paul E.
 Williams, Ronald N.
 Williamson, Adrian III
 Wills, Pamela
 Wilson, Elaine
 Wilson, Frances C.
 Wilson, Frank J. Jr.
 Wilson, I. Dodd
 Wilson, James M.
 Wilson, James W.
 Wilson, John L.
 Wilson, R. Sloan
 Wolverton, John
 Workman, W. Wayne
 Worley, Linda
 Wortham, Thomas H.
 Wyatt, Richard A.
 Yamauchi, Terry
 Yee, Suzanne
 Yocum, John
 Young, Douglas E.
 Young, Scott M.
 Yousuff, Sarah S.
 Ziller, Stephen A. III
 Ziomek, Stanley
 Zuerlein, Terrance

Randolph County

Baltz, Albert L.
 Barre, Hal S.
 Corcoran, Gavin R.
 DeClerk, Thomas
 Guntharp, George
 Holt, Danny B.
 Jansen, Andrew J. III
 Scott, William W.
 Smith, Norman K.

Saline County

Ashby, Robert
 Baber, Quin M.
 Beard, Michael R.
 Bethel, James
 Boyle, Ronald H.
 Burba, Alonzo R.
 Burton, Charles R.
 Caldwell, David L.
 Cash, Ralph D.
 Cathcart, Evelyn
 Chaffin, Raines
 Coker, S. Dale
 Cooper, James B.
 Council, Robert A. Jr.
 Dockery, Melissa
 Duncan, J. Shelby
 Eaton, James M.
 Gardner, Dan R.
 Harper, Donald
 Hill, Edward B.
 Hill, Howell V.
 Hogue, F. Paul
 Iazard, Ralph S. Jr.
 Johnston, Greg
 Kirk, Marvin N. Jr.
 Martindale, J. L.
 Martindale, Mark A.
 Menard, John C.
 Ramsay, Rex C. Jr.
 Schmidt, Michael J.
 Stewart, David L.
 Sudderth, Brian F.
 Taggart, Sam D.
 Thibault, Frank G. Jr.
 Thomas, Bill R.
 Thorn, Harvey Bell Jr.
 Tilley, Roger L.
 Vice, Mark
 Viner, Donald L.
 Watson, Kirk D.
 Wright, John D.

Sebastian County

Acklin, Jimmy D.
 Albers, David G.
 Alberty, Joe
 Anderson, Paul
 Armstrong, Sinclair Jr.
 Atkins, Jimmie G.
 Axelsen, Nils K.
 Bailey, Charles W.
 Baker, Max A.

Balsara, Zubin
 Barker, Robert Jr.
 Barnes, L. Ford
 Barr, Marilyn
 Barry, James Jr.
 Beachy, Allen L.
 Berryhill, Richard E.
 Berumen, Mike
 Best, Timothy R.
 Bise, Roger N.
 Bodiford, Gary L.
 Bordeaux, Ronald A.
 Bouton, Michael
 Bradford, A. C.
 Brown, Byron L.
 Brown, James A.
 Brown, Richard
 Buie, James H.
 Bulteman, Cynthia
 Bulteman, James
 Burks, Deland
 Busby, J. David
 Cain, Martin
 Callaway, Michael
 Carson, Randall L.
 Cassady, Calvin R.
 Cesar, Luis Geraldo G.
 Chalfant, Charles
 Chester, Robert L.
 Cheyne, Thomas
 Chosney, Bruce
 Coffman, Edwin L.
 Coleman, Michael D.
 Cook, Charles
 Craft, Charles
 Crow, Neil E. Sr.
 Crow, Neil E. Jr.
 Culp, William C.
 Davenport, O. Leo
 Deaton, John M.
 Deneke, James S.
 Diment, David D.
 Dorzab, Joe H.
 Drolshagen, Leo F. III
 Dudding, William F.
 Edwards, Gary
 Ellis, Homer G.
 Ennen, Randy
 Feder, Frederick P. Jr.
 Feezell, Randall E.
 Feild, T. A. III
 Felker, Gary V.
 Ferrell, Jeffrey

Fisher, Robert D.
 Flanagan, A. Dean
 Fleck, Randolph Peter
 Fleck, Rebecca
 Flippin, Tony A.
 Florian, Thomas
 Floyd, Charles H.
 Francis, Darryl R. II
 Franz, F. Perry
 Frederick, James A.
 Gamble, Cory
 Gardner, Kenneth
 Gedosh, Edgar A.
 Gill, James A.
 Girkin, R. Gene
 Glover, D. Bruce
 Goodman, R. Cole Jr.
 Goodman, Raymond C. Sr.
 Griggs, William L. III
 Gwartney, Michael P.
 Hamilton, Lance
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 Harmon, Pamela
 Harris, Shirley D.
 Hathcock, Alfred B.
 Heim, Stephen
 Hendrickson, Jon
 Henry, James
 Herren, Adrian L.
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 Hewett, Mark Alan
 Hoffman, John D.
 Hoge, Marlin B.
 Holmes, Williams C. Jr.
 Hornberger, Evans Z. Jr.
 Howell, James T.
 Hughes, Robert P. Jr.
 Hunton, David W.
 Huskison, William T.
 Ihmeidan, Ismail H.
 Ingram, Ralph N.
 Irwin, Peter J.
 Jaggars, Robert
 Janes, Robert H. Jr.
 Jefferson, Christina M.
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 Jones, Greg T.
 Jones, W. Duane #
 Kareus, John L.
 Kelly, Thomas C.
 Kelsey, J. F.
 Keyashian, Mohsen
 Kientz, John Jr.

Kinard, Hugh
 Klopfenstein, Keith
 Knight, William E.
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 Kocher, David B.
 Koenig, A. Samuel III
 Koenig, Albert S. Jr.
 Kradel, R. Paul
 Kramer, Ralph G.
 Kutait, Kemal E.
 Kyle, W. Lamar
 Lambiotte, Louis O.
 Landherr, Edwin
 Landrum, Annette V.
 Landrum, Samuel E.
 Lane, Charles S. Jr.
 Lavery, John
 Lenington, Jerry O.
 Lilly, Ken E.
 Little, Charles
 Lockwood, Frank M.
 Long, James W.
 Loyd, Gregory M.
 MacDade, Albert D.
 Magness, Jack L. Jr.
 Manus, Stephen C.
 Marsh, Michael A.
 Martimbeau, Claude
 Martin, Art B.
 Martin, Rick
 Marvel, Jeffrey
 Mason, Clinton
 Masri, Hassan M.
 Mauroner, Richard F.
 McCarty, Joseph
 McClain, Merle
 McClanahan, J. David
 McCoy, Mark
 McCraw, Gordon
 McEwen, Stanley R.
 McKinney, Robert
 McMinimy, Donald
 Meador, Don M.
 Mehl, John Kurt
 Miller, Robert M.
 Mings, Harold H.
 Moore, Trudy J.
 Moore-Farrell, Laura
 Mosley, Myra C.
 Moulton, Everett C. Jr.
 Moulton, Everett C. III
 Mumme, Marvin E.

Muylaert, Michel
 Nassri, Louay K.
 Nelson, Steve B.
 Nichols, David R.
 Niemann, Jeffrey M.
 Nolewajka, Andre J.
 O'Bryan, Robert K.
 Olson, John D.
 Paris, Charles H.
 Parker, Douglas W. Jr. #
 Parker, Joel E. Jr.
 Parker, Thomas G.
 Payson, Tony A.
 Pearce, Larry W.
 Peluso, Francis
 Pence, Eldon D. Jr.
 Phillips, Don
 Phillips, Kevin Clark
 Phillips, Sumer
 Phillips, Tonya
 Phillips, W. P.
 Pillstrom, Lawrence G.
 Poe, McDonald Jr.
 Poole, M. Louis
 Porter, Neill C.
 Post, James M.
 Prewitt, Taylor A.
 Price, Claire
 Price, Lawrence C.
 Rabideau, Dana P.
 Raby, Paul L.
 Raymond, Thomas H.
 Rivera, Raul
 Robinson, Ronald P.
 Rodgers, Brian H.
 Rosenzweig, Kenneth
 Russell, Rex D.
 Sanders, Robert E.
 Sanders, Robert V. III.
 Saviers, Boyd M.
 Schemel, William H.
 Schroeder, Cygnet
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 Schwarz, Paul R.
 Seiter, Kenneth
 Shahbandar, A. B.
 Sherrill, William M. Jr.
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 Snider, James R.
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 Stewart, Jerry R.

Stewart, John B.
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 Stillwell, Mark
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 Vernon, Rowland P. Jr.
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 Wahman, Gerald E.
 Wallace, Kenneth K.
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 Weisse, John J.
 Wells, John D.
 Westbrook, Michael R.
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 Westermann, Norman F.
 White, J. Earle III
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 Williams, Carl L.
 Wills, Paul I.
 Wilson, Morton C.
 Wolfe, Michael S.
 Woods, Leon P.
 Wright, C. Kent
 Wright, Timothy F.
 Zufari, Munir M.

Sevier County

Buffington, Mike
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 Hoyt, Jonathan
 Jones, Charles N.
 Mielnick, Alina
 Shefa, Ahmad Zia
 Stearns, David E.

St. Francis County

Ajamoughli, Ghaith
 Collins, E. Morgan Jr.
 Conner, George
 Crawley, Charles E. #
 DeRossitt, James P. III

Fong, Fun Hung
 Hammons, Edward P.
 Iskander, Henein
 Kumar, Sudhir
 Lopez, Ramon E.
 Meredith, James Jr.
 Merritt, James M.
 Patton, W. Curtis
 Schwartz, Frank R.
 Webber, David L.

Tri-County

Ablog, Angel Diego
 Arnold, Carl
 Arnold, Griffin II
 Benton, Thomas H.
 Bozeman, Jim G.
 Campos, Louis
 Ducker, David E. #
 Graham, Paul A.
 Grasse, A. Meryl
 Jackson, George W.
 Krygier, Albin J.
 Lane, Robert C.
 Moody, Michael N.
 Relyea, William V.
 Tatum, Harold M.
 Tucker, Charles L.
 Wright, Donald

Union County

Abbott, Judy
 Anzalone, Gary
 Arceneaux, Matt
 Barenberg, Andrew
 Barenberg, Robert
 Bevill, Gary L.
 Booker, J. Gregory
 Bowman, Raymond N.
 Bryant, D'Orsay III
 Callaway, Matthew Dates
 Carroll, Peter J.
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 Davis, Richard K.
 Deere, Joy
 Dixon, R. Mark
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 Dunn, Tom L. #
 Duzan, Kenneth R.
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 Ellis, Jacob P.
 Fitch, Leston E.

Forward, Robert B.
 Fraser, David B.
 Giller, W. John Jr.
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 Lucas, John J.
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 Ong, Tie S.
 Pillsbury, Richard C.
 Pirnique, Allan S.
 Ratcliff, John
 Ray, Robin Phinney
 Rogers, Henry B.
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 Schultz, Wayne H.
 Scurlock, William R.
 Seale, James E. Jr.
 Sheppard, Julius
 Smith, George W.
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 Stevens, Willis M. Jr.
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 Tolosa, Elizabeth
 Tommey, C. E.
 Tommey, Robert C.
 Turnbow, R. L.
 Ulmer, Minna I.
 Vasan, Srin
 Warren, George W.
 Weedman, James B.
 Williamson, John R.
 Wilson, Larkin M. Jr.
 Yocum, David M. Jr.
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Van Buren County

Hall, John A.
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 Smith, James F.
 Starnes, Harry

Washington County

Abernathy, Bryan
 Albright, Spencer III
 Applegate, C. Stanley Jr.
 Arnold, James

Atwood, H. Daniel
 Bailey, Donald C.
 Bailey, Scott
 Baker, C. Murl Jr.
 Baker, Donald B.
 Baker, James
 Baker, Kevin G.
 Bays, L. Jerald
 Beckman, James Jr.
 Blankenship, James
 Bonner, Mark
 Box, Ivan H.
 Boyce, John M.
 Brannon, Dabney
 Bredfeldt, Raymond
 Brooks, D. Wayne
 Brooks, W. Ely
 Brown, Bruce B. Jr.
 Brown, Craig
 Brown, David L.
 Brunner, John A. III
 Burnside, Wade W. Jr.
 Burton, Anthony R.
 Butler, G. Harrison
 Cale, Charles
 Cameron, Mark
 Carver, Joel D.
 Chase, Patrick R.
 Cherry, James F.
 Coker, Tom P.
 Coker, Tom Patrick
 Cole, George R. Jr.
 Cooper, Craig
 Councille, Clifford C. Jr.
 Crittenden, David R.
 Crocker, Thermon R.
 Cross, Michael J.
 Davis, David A.
 Davis, Randall
 Decker, Harold
 Denley, Thomas
 Dodson, C. Dwight
 Dollins, Stephen
 Dorman, John W.
 Duke, David D.
 Duncan, Philip E.
 Dykman, Thomas R.
 Eck, Gareth
 Edmondson, Charles T.
 Fincher, G. Glen
 Fish, Ted J.
 Fossey, Carol
 Gardner, Buford M.
 Garner, Hershel H.

Ginger, John D.
 Gray, Dalton L. II
 Grear, Danna
 Grote, Walton
 Haisten, James
 Hall, Ben
 Hall, Joe B.
 Harris, Murray
 Harris, Paul L.
 Harris, W. Duke
 Harrison, William F.
 Hart, Hamilton R.
 Haynes, James
 Hayward, Malcolm L. Jr.
 Hedberg, Curtis
 Heinzelmann, Peter R.
 Hendrycy, Paul R.
 Henry, Morris M.
 Higginbotham, Hugh B.
 Higginbotham, William
 Hoffman, Carl E.
 Holden, Donnie
 Hollomon, Michael
 Hui, Anthony
 Hurlbut, Kevin
 Hutson, Martha
 Hutson, Sanford E. III
 Inlow, Charles W.
 Ivy, Donald
 Johnson, Miles M.
 Knox, D. Luke
 Koehn, Laura J.
 Kraichoke, Saran
 Landrum, Leslie G.
 Litton, Eva W.
 Long, Robert M.
 Magness, C. R.
 Mahan, Meredith
 Martin, F. Allan
 Martin, William C.
 Mashburn, James D.
 McAlister, Joseph H.
 McAlister, Mitchell
 McAllister, Max F. #
 McBee, Sara
 McDonald, James E. II
 McElroy, Kellye
 McEvoy, Francis
 McGhee, Linda M.
 McGowan, William
 McNair, William R.
 Miller, Charles H.
 Mills, William C. III
 Moon, Steven L.

Moore, Arthur F.
 Moore, James F.
 Morse, Michael
 Mullis, R. Jay
 Murry, J. Warren
 Nettleship, Mae B.
 Nowlin, William B.
 Oates, Randall B.
 Ortego, Terry J.
 Owens, Sherry L.
 Pang, Robert
 Park, John P.
 Parker, Joe C.
 Parker, Lee B. Jr.
 Patrick, James K.
 Pesnell, Larkus H.
 Pickett, James D.
 Pickhardt, Mark G.
 Pope, Kevin L.
 Power, John R.
 Proffitt, Danny L.
 Raben, Cyril
 Raben, Susan
 Reese, Valerie
 Riddick, Earl B. Jr.
 Riner, Dan M.
 Rogers, David L.
 Romine, James C.
 Ross, Joseph
 Rouse, Joe P.
 Runnels, Vincent B.
 Schemel, Lawrence J.
 Schmidt, Clinton C.
 Sexton, Giles A.
 Sexton, Jon A.
 Shaddox, T. Stephen
 Sharp, Jim D.
 Siegel, Lawrence H.
 Simmons, Thomas
 Singleton, E. Mitchell
 Sisco, Charles P.
 Smith, Austin C.
 Snyder, Norman I.
 Stagg, Stephen W.
 Taylor, Robert G.
 Thomas, Joanna M.
 Titus, Janet L.
 Tomlinson, Robert J. Jr.
 Turner, Sam
 Tuttle, Larry D.
 Ubben, Kenneth
 Ureckis, David
 Ward, H. Wendell

Weed, Wendell W.
 Weiss, John B.
 Wheat, Ed Jr.
 Whiteley, Andre
 Whiting, Tom D.
 Whitney, Richard N.
 Wilson, Robert B. Jr.
 Wood, Jack A.
 Wood, Russell Hunter
 Wood, Stephen T.

White County

Asmar, Salomon
 Baker, Ronald L.
 Bell, John
 Blickenstaff, Kyle R.
 Blue, Glen T.
 Blue, Leon R.
 Brown, Arnold R.
 Brown, Terry Mac
 Burns, Jerry
 Citty, Jim C.
 Collier, Steven F.
 Covey, David C.
 Davidson, Daniel
 Elliott, Robert E.
 Fincher, S. Clark
 Formby, Thomas A.
 Gardner, Jack R.
 Gibbs, William M. III
 Golleher, James H.
 Harrison, Jack W.
 Hatfield, David L.
 Henderson, John C.
 Holston, John S.
 Jackson, Clarence W.
 Johnson, David M.
 Joseph, Eugene A.
 Justus, Michael G.
 Killough, Larry R.
 Kinley, J. Garrett
 Koch, Clarence W. Jr.
 Lefler, Stephen F.
 Lewing, Hugh S.
 Lowery, Benjamin R.
 Lowery, Robert D.
 Maguire, Frank C. Jr.
 McAdams, Edward L.
 McCoy, James R.
 Meacham, Kenneth R.
 Millstein, David
 Moore, Donald
 Nevins, William H.

Norris, E. Lloyd
 Ramirez, Raul
 Ransom, Clarence E. Jr.
 Raspberry, Ronnie D.
 Rodgers, Porter R. Jr.
 Schwartz, Stanley S.
 Sherwood, Gary
 Shultz, Sam L.
 Simpson, James A.
 Smith, Bernard C.
 Smith, Bob W.
 Staggs, David L.
 Stinnett, J. L.
 Tate, Sidney W.
 Taylor, David H.
 Thompson, Bruce
 Weathers, Larry W.
 White, William D.
 White, William M.
 Williams, W. Curtis
 Yates, Terrence

Woodruff County

Hendrixson, Basil E.
 Rowe, James E.

Yell County

Bull, L. J. #
 Graves, Kim
 Green, Terry G.
 Harris, Walter P. #
 Hejna, Thomas
 Hodges, Jerry F.
 Luker, Jerome H.
 Martin, Damon G. H.
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 Pennington, James O.
 Ring, Gene D.
 Russell, Gary W.
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Direct Members

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 Agnew, Samuel
 Ahmed, Sahibzada
 Akins, Victoria
 Akkad, Nabil
 Al Mounajed, Ghanem
 Al-Ghussain, Emad A.M.M.
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 Allison, Janice W.

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 Angtuaco, Edward E.
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 Blucker, Linda
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 Boyd, Anita
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 Collins, Harold B. II
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Fiser, Debra B.	Ibrahim, Manar S.A.	Meyer, Lawrence H.	Shumate, Linda
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Fontenot, H. Jerrel	Istanbouli, Wajih	Minnich, Thomas E.	Simpson, Todd R.
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Ganelli, Ronald R.	Jackson, Richard J.	Moore, Steven M.	Smith, Harold K.
Garbutt, Leopold H.	Jasin, Hugo	Moran, Kevin	Smith, Kirby L.
Gilbert, Jimmy	Jones, Robert E.	Moutos, Dean M.	Smith, Samuel D.
Glasier, Charles	Josef, Stanley	Neal, Linda A.	Smith, Terry R.
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Gober, Gregg	Kannout, Fareed	Nichols, Roger D. II	Spence, Don K.
Goodman, Jack	Keeter, L. Phil	Nichols, Sandra D.	Stair, J. Michael
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Graham, Charles J.	Kennedy, Robert	Norton, J.B. Jr.	Steinemann, Thomas L
Grasse, John Jr.	Kirchner, Jeffrey	O'Keefe, Dorothy A.	Stephens, Wanda
Grisham, Dannetta	Kraemer, Soren R.	Osborn, Daniel R.	Stern, Thomas N.
Gubin, Steven S.	Krebel, Meredith	Osofisan, Olaniyi	Steward, Rodney Jr.
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Hagaman, Michael S.	Kuykendall, Margaret	Papageorge, Dean	Sturner, William Q.
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Hardin, A. Scott	Lange, John L.	Plunk, Hermie G.	Talley, J. David
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Harrell, James Jr.	Lewis, Charles	Purnell, Gary L.	Teeter, Mark
Harris, Russell	Lewis, George L.	Quinn, Brian D.	Teo, Charles
Harrison, Lonnie Eugene	Lindsay, Herbert L.	Rader, George	Thrower, Rufus
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Heinemann, Phyllis E.	Lyle, Robert	Robinson, Nancy	Turner, Jan L.
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Hicks, Charles E.		Rozas, David	Vallery, Samuel W.

Van Hemert, Rudy
 Vermont, Charles
 Wade, Walter Burke
 Waheed, Atiya N.
 Warren, E. Taliaferro
 Watermann, Eugene
 Webb, Malinda
 Wendel, Paul J.
 Westwood, John Jr.
 Weyrich, Randall P.
 Wheeler, Richard
 Whitaker, John
 White, Paul C. Jr.
 Willis, Charlotte
 Wilson, Cynthia
 Wood, Michael D.
 Wood, W. Rebecca
 Woodson, Mark
 Wylie, Paul
 Yaseen, Mohammad
 Yawn, Timothy
 Yazdani, Aijaz A.
 Yoser, Seth L.
 Young, Michael C.
 Yuen, James C.
 de Mondesert, Eduardo A.

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 Allen, B. Eual
 Allgood, John
 Andrews, Sean
 Angel, Carol
 Angelocci, Tracy
 Ansari, Mohsin K.
 Antakli, Tamim
 Arick, Carmen L.
 Atkin, Stuart R.
 Avva, Ramesh
 Bailey, Don M.
 Baldwin, Shelly
 Balis, Luc G.
 Baltz, Katherine
 Banerjee, Pushpal R.
 Barnes, James
 Barrett, Rebecca

Bates, William
 Bauknight, Nichole
 Bayer, Ilene Bertha
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 Beasley, Darryl K.
 Beck, James F.
 Beckel, Ron Jr.
 Beebe, William E.
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 Bonner, Cynthia
 Bonner, Steven
 Bonwich, Janina R.
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 Brady, John G.
 Brashears, Clay
 Braun, Sarah
 Brewer, Jonathan K.
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 Bruffett, Wayne
 Buckner, Amy
 Buice, Kelly
 Burks, Karen
 Burr, William E. Jr.
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 Calicott, Timothy
 Callahan, Stephen
 Carino, Richard
 Carter, Charles
 Cash, David
 Cash, J. Steven
 Ceola, Wade
 Cerrato, Deborah
 Cheng, Richard Z.
 Chu, Melissa
 Chumley, Willard T. Jr.
 Cisneros, Teresa C.
 Clary, Cathy
 Clause, David B.
 Claycomb, Scott C.
 Cobb, Mark
 Cochran, Melvin
 Coffman, John
 Cole, Andrew
 Coleman, Roy D.
 Colvin, G.B. 'Kip' IV
 Connelley, Jay

Connelley, Jon R.
 Contrucci, Ann L.
 Conway, Warren L.
 Cook, Jonathan M.
 Coombe-Moore, Jackie
 Cooper, Keith
 Coppola, Angelo Jr.
 Cottone, Joseph
 Coutts, William II
 Crafton, Eugene M.
 Craig, Jeffrey
 Craig, Sherrye
 Cunningham, Mary
 Dalton, Cara
 Dang, Stuti
 Daniel, George K.
 Daniels, C. Dwayne
 Daniels, Rebecca J.
 David, Alex
 Davis, Marc J.
 Davis, Thomas
 DeFreese, Travis
 Delap, Susan
 Devabhaktuni, Nalini
 Diamond, Corey
 Diamond, Kevin
 Dibrell, Fredrick
 Dickerson, Brenda K.
 Dicus, G. Scott
 Dietz, Tracy
 Diles, Timothy R.
 Dillaha, Jennifer
 Domon, Steven E.
 Dopp, Patrick
 Driskill, Angela
 Duke, John
 Dunigan, Rodger
 Dunaway, Joseph D.
 Dunn, James R.
 Ebsen, Tammy
 Ehret, Roger
 Ehret, Rose
 Elliott, Timothy H.
 Elnabtity, Mohamed
 Emanuel, Peter
 Embry, Travis D.
 Emery, Robert
 Endsley, Charolette
 Erwin, John
 Espinoza, Jude
 Evyan, Michele
 Farajallah, Awny
 Farooque, Mustafa

Farst, Karen J.
 Fegan, Jeff
 Ferguson, Max Ann
 Ferguson, Scott Frazier
 Ferguson, Susan Portis
 Ferrell, Amanda
 Ferrer, Thomas J.
 Fink, Roger Lee
 Fischer, Michael
 Fiser, Richard
 Fitzgerald, Amy
 Flamik, Darren E.
 Flanigin, Richard
 Flippin, Dane
 Fortin, Elise
 Fox, Robert II
 Franks, Hayden
 Friesen, Gary M.
 Froman, Elizabeth A.
 Frost, Don
 Gannon, Patrick R.
 Garner, Dewey Duane
 Garner, Hayley
 Garner, Kimberly
 Garrett, George C. Jr.
 Garrison, Gregory T.
 Gati, Kenneth G.
 Gilmore, Barry
 Glasco, Gerry B.
 Good, Tina
 Goodson, Timothy C.
 Govindarajan, Rangaswamy
 Graham, Missy
 Graham, Richard
 Grant, Jerry
 Gray, Janet
 Green, Cheryl
 Griffin, David
 Grose, Andrew
 Guevara, Doyle P.
 Gurley, Louellen B.
 Guyer, Michael L.
 Habibipour, Saied
 Hadjari, Minoo H.
 Haight, Ann E.
 Hajiamiri, Majid
 Hale, Arthur E.
 Haley, Tonya
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 Hardy, Ross A.
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Hashmi, Shakeb	Knight, Michael	McCay-Prince, Audra	Pryor, Shapard Jr.
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Johnson, Michael	Manavalan, Pius L.	Pankiewicz, Irena	Schalchlin, Curtis
Jonak, Hermann F.	Margaret, Heather	Paredes, Mark F.	Schiefer, Mark Anthony
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Kelly, Kathleen	Massanelli, Gregg	Perkins, Lalita	Shaver, Mary
Kelly, Patricia	Massey, Deborah A.	Perkins, Richard	Shaver, Robert
Kempson, Steven E.	Massey, Samuel O. III	Phillips, Rebecca	Shaw, Allison
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Horras, Randy J.	McDonnell, Bryan D.	Runion, Lance	Thomas, Michael L.
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Jackson, Matthew P.	Meyer, Brian E.	Schneider, Michael G.	Vest, Carl E.
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Johnson, Jill D.	Moore, Troy G.	Sharaf, Mai F.	Wang-Gillam, Andrea
Johnson, Lee M.	Morris, Kellie A.	Shoppach, Jon Paul	Ward, Laura L.
Johnston, Alan C.	Naugler, Scott	Short, Walter	Washburn, Allen
Johnston, Carol L.	Naylor, David L.	Shrestha, Shraddha S.	Webber, John C.
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Kaler, Ronald J.	Netherland, Clinton	Sims, Jennifer J.	White, Richard A.
Keith, Rita J.	Nguyen, Dzuy T.	Slay, David	Whiteside, Thomas F.
Kellar, Jeffrey D.	Noel, Stacey W.	Smith, Daniel F.	Williams, Nancy K.
Kelly, Owen L.	Nolen, Michael	Smith, H. Scott	Williams, Roselyn C.
Kendrick, Gregory A.	Nowell, Becky A.	Smith, Matthew W.	Williams, Veronica
Kerr, Kirsten S.	Nwokedi, Emmanuel	Sneed, Thomas B.	Williamson, Anthony P.
Kinneman, Kay L.	O'Neal, Keane T.	Speer, Christine E.	Wilson, John E.
Knox, Christopher G.	Oglesby, Jimmy E.	Speight, Tracy	Wofford, Scott A.
Koehler, Kevin R.	Orender, J. Micheal	Staggs, Amy E.	Wood, Jim E. III
Kowalski, Magda U.	Ortiz, David D.	Staggs, Susan E.	Woods, Cecolra L.
Kruse, Lori	Page, Robert	Staley, Kelly	Woods, Mark A.
Kueter, Joseph C.	Pappas, Paul H.	Stallcup, Tory L.	Wooten, R. Gregory
Layton, Ann D.	Pappas, Pui Fun W.	Stanton, Mary	Workman, James L. Jr.
LeRoy, Sherri	Parker, Melanie A.	Steinert, Dejka	Wright, Benjamin C.
Lee, Ronnie D.	Parmley, Patricia E.	Steingraber, Kristin	Zelk, Misty M.
Lewis, James S. Jr.	Peng, Edwin H.	Stern, Thomas P.	Zimmerman, Stacy
Lindsey, Brad L.	Penney, Michael W.	Stewart, Jason G.	
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Volume 92 Number 8

January 1996

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page 422

A New HIV/AIDS Drug
page 407

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 8

January 1996

CONTENTS

FEATURES

- 388 Professional or Commercial
Editorial
Samuel E. Landrum, M.D., F.A.C.S.
- 390 Gastroesophageal Reflux in Children
Scientific Article
Mohammad Yaseen, M.D.
Helen Butler Casteel, M.D.
- 399 Primary Care Equals Primary Responsibility
Loss Prevention Case
J. Kelley Avery, M.D.

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DEPARTMENTS

- 401 Cardiology Commentary & Update
405 State Health Watch
408 Arkansas HIV/AIDS Report
411 New Members
413 New Member Profile
414 Outdoor MD
415 Radiological Case of the Month
420 AMS Newsmakers
421 Medicine in the News
425 In Memoriam
426 Things to Come
427 Keeping Up

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Professional or Commercial

Samuel E. Landrum, M.D., F.A.C.S.*



Fellow Medical Workers of America, please permit me to express some concerns that I have had increasingly for the recent ten years. This particular editorial has been germinating for some time and is perhaps precipitated by the recent form to complete for the Arkansas State Medical Board for license renewal. Let me hasten to emphasize that the following applies to renewal requests for several professional societies and associations. I am astounded that the requested information on such forms now is for me to furnish my BUSINESS address. I had always believed that I was joining a professional group rather than a guild, trade, or other business association. Thus, I have always crossed out the word BUSINESS and submitted my OFFICE address or phone number. Regrettably, this has failed the eye or mind of the several secretaries of these organizations because the renewal form on successive years continues to seek my BUSINESS address. I intensely detest being thought to have a BUSINESS. I have always considered that I had an OFFICE for the practice of a profession. If that sounds out of touch with the way things are nowadays, then we are about sunk as a profession.

Our emblem has been changed during recent decades from the caduceus of Aesculapius, the father of medicine, to the staff of Mercury, the god of commerce.

We are being moved in a wrong direction by fuzzy minded people who have very little knowledge of the responsibility implied by a professional relationship. We hear students and some allied professionals talk about sick people as CLIENTS rather than patients.

* Dr. Landrum is affiliated with Holt-Krock Clinic in Fort Smith and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

This pervasive talk slowly sinks into our conversations and softens our convictions about the doctor-patient relationship. Chief of these convictions is that the patient's welfare is paramount; whereas, a client's status is closer to that of a customer; and profit is a principal expected outcome for the seller or provider. This conviction is threatened by those doctors who more often talk of their sources of business than they do about their patterns of referrals. This shames the profession.

Our emblem has been changed during recent decades from the caduceus of Aesculapius, the father of medicine, to the staff of Mercury, the god of commerce. This insidious slippage has derived from the use of the symmetrical two snakes on the insignia of medical corps uniforms in the military services and the probable ignorance of doctors who do not realize that the caduceus of Aesculapius has only one snake. It has been reinforced by no one among our professional ranks objecting to this change. I forewarned our county medical society to have it properly used for some booklet being prepared by the Chamber of Commerce here twenty or so years ago; but when the pamphlet was published, there was the staff of Mercury. Likewise, it is so on the letterhead of the clinic where

I practice, over my objection.

Marketing is an accepted word and aggressively pursued nowadays to promote medical services. This jargon has been allowed to invade our lives by people who are riding doctors' coattails disguised as enhancers for our practices. If a physician is trained to practice competently, is willing to be available and work and treats patients and fellow doctors fairly, it is almost

assured that there will be no need for such enhancers to have a satisfying life in medicine. Advertising was considered completely unethical for a physician until the courts (lawyers) determined that it was needed to avoid the appearance of restraint of trade. I believe that this change in our ethical makeup has damaged us as a profession far more than the thrusts from governments and insurance regulators.

Where I interned, the doctor for whom a five-member clinic was named was censured by the county medical society because his name was on the front of the clinic building in letters more than two inches high. That exceeded the permissible allowance there.

My surgical residency chief would rail at those who began talking about "health care delivery." He wondered how long it would be before patients (clients?) could call and say "Hey, doc, deliver me some health

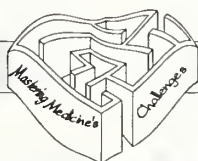
care!" as though we conducted our practice like a pizza shop.

Regardless of the above concerns that I - as well as many other doctors - have about this profession, I still believe that medical practice permits the nearly sacred experiences that occur when someone is sick and seeks

My surgical residency chief would rail at those who began talking about "health care delivery." He wondered how long it would be before patients (clients?) could call and say "Hey, doc, deliver me some health care!" as though we conducted our practice like a pizza shop.

care of a physician. We can enjoy this essential core of our profession in spite of the current and expected payment methods patients select. We shall never see the days when the statement for a patient reads "For professional services—\$X" again; however, I do inwardly mourn that too often I must consider myself a commercial surgeon rather than a professional one. "Nils bastardos carborundum." ■

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Gastroesophageal Reflux in Children

Mohammad Yaseen, M.D.*

Helen Butler Casteel, M.D.*

INTRODUCTION

Gastroesophageal reflux (GER) is the regurgitation of gastric contents into the esophagus. GER can be symptomatic when it manifests in the form of vomiting or occult when the refluxed material reaches various levels of the esophagus and is cleared to the stomach. GER is also considered in cases of unusual irritability or colic, apnea, recurrent pneumonias, early onset of reactive airway disease, stridor, or nocturnal cough. Most children with reflux come to medical attention because of regurgitation or vomiting. It is estimated that over 60% of otherwise normal infants have GER.

GER is believed to be a developmental disorder of upper gastrointestinal motility due to immaturity of smooth muscle in the lower esophagus and antropyloric channel. It usually has no underlying anatomic, infectious, inflammatory, metabolic or neurologic abnormality. As GER is a maturational disorder, it usually resolves spontaneously by 14 months of age. Some infants may be markedly improved by 6 - 8 months old.^{1,2}

In contrast, GER presenting after the first year of life is seldom self-limiting and is similar to adult gastroesophageal disease (GERD). It is more often associated with other medical conditions such as severe psychomotor retardation, hiatal hernia, more global gastrointestinal motility problems, or post-tracheoesophageal fistula or esophageal atresia repair. It can, however, be idiopathic in an otherwise normal child.

GER in infants can present with minimal symptoms, such as gurgling, spitting or vomiting and remain free of sequelae (functional ger). More serious forms of GER (pathogenic) can include the development of severe esophageal, respiratory and growth disorders. (Table 1)

Table 1
Spectrum of Gastroesophageal Reflux

FUNCTIONAL GER	PATHOGENIC GER
Symptomatic	Apnea
(vomiting) →→→→→→→→	Bronchospasm
Occult	Recurrent pneumonia
(no vomiting)	Failure to thrive

Example of pathogenic gastroesophageal reflux:

A three month old male had emesis starting shortly after birth. The vomiting was occasionally projectile, but more often seemed effortless. Initially the symptoms were more spitting after feedings, but then the infant began to cough and choke and had increased irritability. The child was admitted to the hospital after he became pale and limp following a feeding. He had suddenly stopped breathing for more than 15 seconds, but responded quickly when blown into the mouth by his caregiver.

PATHOPHYSIOLOGY

GER is passive movement of the gastric contents back through the esophagus, which occurs infrequently in all people. The intra-thoracic pressure is lower than the intra-abdominal pressure, providing a natural tendency for the food from the stomach below the diaphragm to move into esophagus above the diaphragm. The lower esophageal sphincter (LES), an area of circular smooth muscle, is a key element in preventing GER. Other factors contribute to the protection of the esophagus from reflux especially during coughing, deep inspiration or during the Valsalva maneuver (Table 2). The LES should relax only in the context of peristalsis, either primary or secondary. If it relaxes independently from peristalsis, GER will occur due to the

* Drs. Yaseen and Casteel are with Pediatric Gastroenterology Associates in Little Rock.

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Table 2
Factors Preventing GER and
Acidification of the Esophagus

- * Reinforcement of the crural muscle to the lower esophagus
- * Clearance of refluxed material by gravity and peristalsis
- * Buffering of acid by saliva
- * Angle by which the esophagus meets the stomach (angle of His)
- * Rate of pressure transmitted to the lower esophagus during contraction of crural diaphragm

pressure difference between the chest and abdomen. It was originally thought that infants had abnormally low LES pressure, but simultaneous measurements of LES pressure and esophageal pH showed that LES pressure is usually normal. Episodes of GER more often result from transient drops in LES pressure which is not in response to normal esophageal peristalsis, such as a swallow. Intraesophageal reflux of acidic gastric material then occurs. The mechanism of transient drops in the LES pressure, or why reflux does not happen in all patients, is not known. Contributing factors could be the effects of gastric distention upon LES tone, or swallows which fail to propagate. This may be mediated by the vagus nerve through noncholinergic, nonadrenergic inhibition of LES pressure.³

The physiology of the stomach allows gastric mucosa to be in contact with acid without harm. The esophageal mucosa's only protection from acid is the mechanism which prevents reflux. Newborn infants have low acid production which results in increased gastrin levels and thus higher LES pressures. At approximately 2 months of age, acid production increases and LES pressure falls. Infant formulas act as a buffer, and are usually fed frequently. However, when the esophageal mucosa is injured, it is susceptible to further injury from pepsin and bile acids.

Slow gastric emptying may be a significant factor in the development of symptoms of gagging or vomiting. Many children with associated pulmonary symptoms, Down's syndrome and older neurologically normal children have delayed gastric emptying.

Children with neurological disease are at greater risk for GER. Ten to 15% of older children with neurologic damage have vomiting, and reflux can be diagnosed in the majority of these patients. Contributing factors are scoliosis, muscle spasm or poor tone, lower LES pressure, chronic supine positioning, or medications.

Table 3
Symptoms of GER

Hiccoughs	Refusal to eat
Chest pain	Vomiting
Gurgling	Difficulty swallowing
Burping	Hoarseness
Stridor	Wheezing
Apnea	Irritability
Sleep disturbances	Colic
Opisthotonos	

SYMPTOMS OF GER

Vomiting, or spitting, is the most common symptom of GER (especially in infants) and the most likely to prompt medical attention. It is typically effortless, and often occurs postprandially (likely because of gastric distention). Many episodes of reflux do not result in emesis, but parents report hearing gurgling or children report feeling fluid come up into their chest or mouth. Older children may also report chest pain, which can be a burning sensation or a sharp pain from esophageal spasm. Pulmonary symptoms are less likely to be the presenting complaint in GER, but can cause significant morbidity.⁴ The symptoms of GER are listed in Table 3 above.

COMPLICATIONS OF GER

Prevention of the complications of reflux (Table 4) is one of the major goals of therapy. Barrett's esophagus (metaplasia of the esophageal mucosa) and esophagitis result from repeated exposure of the esophagus to acid, pepsin or bile acids.⁵ Esophagitis can be seen even in small infants and result in gastrointestinal bleeding, irritability, or food refusal, and occasionally result in esophageal strictures. Sandifer's syndrome,⁶ a positioning of the head to the side which can result in a torticollis, failure to thrive from food refusal⁷ or excessive vomiting, and intraesophageal polyps are other gastrointestinal complications of GER.

Table 4
Complications of GER

Failure to thrive	Aspiration pneumonia
Esophageal stricture	Sandifer's syndrome
Barrett's esophagus	Stridor
Esophagitis	Reactive airway disease
Apnea, bradycardia	

Apnea, bradycardia, acute life threatening episodes, and pulmonary disorders may result from or be exacerbated by GER. Chronic aspiration pneumonias are often seen in neurologically impaired children with GER and can result in permanent pulmonary compromise. Reactive airway disease and stridor are more common respiratory symptoms. They usually result from acid triggering esophageal or laryngeal receptors resulting in laryngo- or bronchospasm. Coughing then increases intra-abdominal pressure causing increased GER.

DIAGNOSIS OF GASTROESOPHAGEAL REFLUX

The diagnosis of functional GER is made on the basis of the clinical history and physical examination. An infant who has spitting up or effortless postprandial emesis accompanied by no other symptoms or abnormal physical findings most likely has functional GER. It is not necessary to demonstrate GER on an upper gastrointestinal (UGI) series before the diagnosis can be made. More often, the UGI series is performed to look for anatomic disorders that can mimic reflux, but would be worsened with treatment, or need other types of therapy. Examples of this are pyloric stenosis, intestinal malrotation, duodenal webs, ulcers or vascular rings. Table 5 reviews the various tests to evaluate GER. Endoscopy should be undertaken in a child who has not responded to therapy or whom has atypical symptoms. Peptic disease in infants and children can be indistinguishable from GER.

MANAGEMENT OF GER

As over 60% of normal infants have GER and most

infants with GER regurgitate, it is reasonable to think that the infant who presents with unremarkable vomiting has GER. Empirical therapy is a simple initial management that does not require further diagnostic testing.

Empirical therapy

1. *Formula change/dietary changes.* Milk intolerance, or sometimes allergy, is a common problem affecting up to 6% of infants, and may take the appearance of GER. The symptoms are attributed to larger proteins leaking through a permeable bowel wall resulting in an inflammatory reaction. Cow's milk or soy proteins are equally allergenic and if there is reasonable suspicion of formula intolerance, then a trial change to a hydrolyzed formula may improve symptoms. If there is no improvement, returning to a whole protein formula is prudent due to the additional cost of hydrolyzed formulas. Anecdotal information shows that GER may worsen in some infants fed hydrolyzed formulas. Elimination of juice is also recommended because of its low pH.

Experimental evidence suggests that formulas may have different rates of gastric emptying and could influence GER by changing the gastric emptying rate.⁸ Long chain fats empty from the stomach slower than medium chain fats, and formulas that contain medium chain fats may offer some advantage in some infants. A recent study showed that infants fed whey hydrolysate had more rapid gastric emptying than infants fed standard casein or soy based formulas. If significant gastroparesis is contributing to GER in an infant, these formula changes could be beneficial.

2. *Thickened feedings.* Thickening feedings, usually with rice cereal, has been used for several decades to improve GER.⁹ It is thought that the greater viscosity provided by a semi-solid mixture will decrease GER and many parents do report less vomiting with baby food. Several studies have attempted to examine the efficacy of thickened feeds with mixed results. It seems to help some infants, make no difference in others, or worsen symptoms in others. Caution should be made to not prepare the formula too thick as to make it difficult

Table 5
Diagnostic Tests in GER

Upper gastrointestinal series	Look for anatomic abnormalities
Gastric emptying study (scintigraphy)	Assess antropyloric function, can document GER
Esophageal pH study	Document the association of symptoms with reflux (such as apnea, bradycardia, pain), document reflux with unusual symptoms (wheezing, opisthotonos), or better quantify the extent of reflux
Upper gastrointestinal endoscopy with biopsy	Demonstrate esophagitis, Barrett's esophagus, or find gastric or duodenal inflammation

for the infant to suck. Usually adding 1 - 1.5 teaspoons of cereal to each ounce of formula is sufficient.

3. *Positional therapy.* Postural therapy has been advocated for a long time, generally keeping the infant upright in an infant seat. Several studies then confirmed that reflux is significantly worse when infants are propped in an infant seat as compared to a prone position of 30 degrees. It is difficult to keep an active child in the prone position for prolonged periods of time. This mode of therapy tends to be impossible to attain, especially in the older infant. In infants without GER, the prone position is not advised because of the possible risk of sudden infant death syndrome (SIDS). However, in infants with GER, the risk of SIDS must be measured against the benefits of positioning.

4. *Small frequent feedings.* This is a standard in the care of adults with GER, and can be applied to infants. Having less in the stomach at one time, thereby decreasing gastric distention, can help to decrease reflux. However, feeding an infant in the home setting more often than every three hours is impractical and physically draining for the parents.

Medical management

Infants who present with more significant vomiting, have failed empiric therapy, or have complications of GER require further evaluation and therapy. It is less important to make the diagnosis of GER, than to diagnose other potential medical problems. The UGI series should be performed if medication therapy is contemplated. It is crucial to obtain an overhead film demonstrating the position of the C-loop of the duodenum and the Ligament of Treitz, to eliminate the possibility of a malrotation. Often it is not obtained, and the sensitivity of the UGI to look for other GI problems is greatly diminished. Additional studies are not necessary at this point, unless symptomatology suggests other processes. Infants who fail to respond to medical therapy should have further evaluation such as a metabolic screen, laboratory work and abdominal ultrasound.

When drug therapy is thought to be appropriate, two types of drugs can be used. Measures to reduce the effects of the refluxate upon the esophageal mucosa include antacid preparations, H_2 receptor blockers, or proton pump inhibitors. Prokinetic agents generally increase LES pressure, promote gastric emptying and relax the pylorus. Each of the prokinetic agents currently available works by a slightly different mechanism, thus some infants may respond better to one medication than to another.

Drugs to manage gastric acid

Antacids buffer gastric acid and provide the most

immediate relief of symptoms related to reflux. Antacids are similar in buffering capacity, however, *Gavison*¹ is described as floating on the top of the gastric pool and may provide better esophageal buffering. Other antacids may be equally as efficacious for symptom relief. The side effects of antacids include diarrhea and excessive magnesium or aluminum absorption.

H_2 receptor blockers such as ranitidine, famotidine and cimetidine are useful adjunct therapy for control of symptoms, but are generally not used singularly. They help only by inhibiting gastric acid secretion and minimizing injury to the esophageal mucosa.

Newer proton pump inhibitors such as omeprazole and lansoprazole act by inhibiting sodium/potassium ATPase in the parietal cell, thereby virtually eliminating all methods of stimulation of gastric acid production. Very limited information is known about these drugs in children and recommendations for dosing are not available.

Prokinetic agents

Bethanechol is a cholinergic agonist which binds to muscarinic receptors and increases smooth muscle contractility and LES pressure. It has little effect on gastric motility, with the majority of its effect upon the LES and lower esophagus. Side effects are similar to other cholinergic drugs, occur in 10-15% of patients and consist of abdominal cramping, increased salivation, increased gastrointestinal secretions, blurred vision, and urinary frequency. Most infants tolerate the drug, but it is not commercially available as a liquid and must be compounded. It is only stable in suspension for two weeks.

Metoclopramide is a dopamine receptor antagonist. It has several other actions which enhance its efficacy, such as a central antiemetic effect. Metoclopramide increases gastric emptying and possibly LES pressure (studies are conflicting). Clinically, however, it is effective and frequently used for the treatment of GER. The most common side effect noted in infants is irritability. It is available in a liquid as a generic product with a concentration of 1 mg/cc.

Cisapride is a substituted benzamide which stimulates serotonin receptors in the myenteric plexus of the gastrointestinal tract. It appears to increase LES pressure, increase gastric emptying, and increase intensity of esophageal contractions. Cisapride has been used in the treatment of GER, chronic intestinal pseudo-obstruction, distal intestinal obstruction syndrome, and gastroparesis. It has several drug interactions which include ketoconazole, clarithromycin and others. It is available as 10 mg and 20 mg tablets and now as a commercially formulated suspension. Previously, compounding was needed to obtain a suspension, and

Table 6
Drug Therapy in Gastroesophageal Reflux

Drug	Dose	Side Effects	Contraindications/Notes
Cimetidine	20-40 mg/kg/day Divided Bid-Qid	Confusion, gynecomastia	Drug interactions with theophylline, metronidazole, propranolol, and certain anticoagulants and anticonvulsants
Ranitidine	3-6 mg/kg/day Divided Bid-Tid	Headache, insomnia	Requires dose reduction in renal disease
Famotidine	1 - 1.5 mg/kg/day Divided Bid-Tid	Headache, dizziness	Dosing not well established in children
Bethanechol	0.4-0.6 mg/kg/day Divided Tid-Qid	Increased GI secretions, urinary frequency, abdominal cramping, blurred vision, bronchospasm	Asthma, bladder outlet obstruction
Metoclopramide	0.1-0.15 mg/kg/dose Given Tid-Qid	Irritability, sleepiness, extrapyramidal movements/dystonia	Avoid using in irritable babies
Cisapride	0.2 mg/kg/dose Given Tid-Qid	Diarrhea, abdominal cramping, increased motor activity	Drug interactions with ketoconazole, miconazole, fluconazole, erythromycin, clarithromycin

unless stabilizers were used, the active medication decomposed rapidly.

Domperidone is a dopamine receptor antagonist with less central nervous system effect. It is used extensively outside the United States, but has not been approved in this country. Erythromycin stimulates contractions in the antropyloric region of the stomach, and possibly increases LES pressure. Its method of action is likely as a motilin receptor agonist, and it has little activity in the distal bowel. Side effects are nausea and abdominal pain, and there is limited information about its use in gastroesophageal reflux in infants.

The pharmacologic agents used to treat GER are listed in Table 6.

Surgical management

Surgical therapy should be considered in infants who fail medical management and have complications of GER. Other considerations are infants who have life threatening events where medical management is thought not to be sufficient to control the events. Examples

of these would be apnea, persistence of respiratory symptoms despite drug therapy, and chronic esophagitis. Another example is an infant with GER who is on therapy, but cries excessively. This child may benefit from surgery, but an esophageal pH study should be performed to attempt to associate the symptoms of crying with episodes of reflux or document the extent of the reflux.

Surgical management is a fundoplication which wraps the fundus of the stomach around the lower esophagus. This creates a fixed area of pressure at the LES which exceeds intra-abdominal pressure and prevents the passive reflux event. Several procedures are available, but the Nissen fundoplication and the Thal fundoplication are most often utilized. The Nissen is a full 360° wrap, and the Thal procedure is a partial wrap. A gastrostomy tube (GT) is often placed, especially in infants < 6-12 months of age. The GT facilitates burping, helps to avoid the gas-bloat syndrome, and can be used for feeding in infants with feeding disorders or neurologic swallowing difficulties. A child with GER who requires a GT should have an accompanying

fundoplication to prevent worsening of the GER after placement of the GT.¹⁰

CONCLUSION

Gastroesophageal reflux is a common disorder of infancy. It resolves spontaneously between 6-14 months of age in most infants, however, some infants will experience moderate to severe complications of GER which include pulmonary, esophageal or growth disorders. Numerous medications and combinations of medicine are available for selected children. Other children's symptoms are severe and require surgical therapy.

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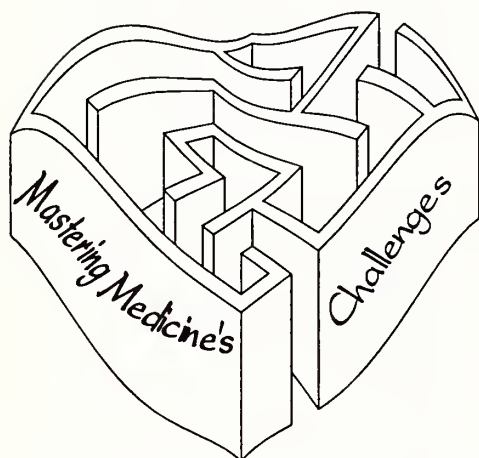
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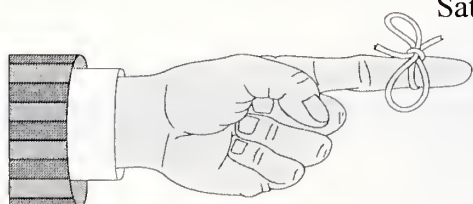
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Primary Care Equals Primary Responsibility

J. Kelley Avery, M.D.*

Case Report

A 32-year-old gravida 2, para 2 reported to her obstetrician/gynecologist (ob/gyn), whom she considered her primary care physician, with a complaint of some fullness in the left breast, which she had discovered about two months before while taking a bath. Six months previously, when the patient had, had a complete physical examination, she had no complaints and the physical examination was completely normal.

The breasts were examined and the physician recorded in the office record "an area of diffuse nodularity in the left breast typical of fibrocystic disease." Nevertheless, he ordered a mammogram as a baseline procedure. The radiologist reported "no definite abnormalities noted." He added that "no calcifications were seen" and "no evidence of neoplastic disease." The report concluded with a statement, "certain neoplasms are not detectable on mammography" and "repeat mammogram should be considered in three months." This was reported to the patient by her primary care physician.

The next visit to her physician was about six months later. She had not menstruated in about ten weeks, and after examination, was said to be eight weeks pregnant. The EDC was determined to be seven months later. Routine prenatal care was begun with this visit. The course was uneventful and the patient was seen at the expected intervals. There was no mention of the breast on the initial examination, but the prenatal record at 20 and 32 weeks contained the notation "no change left breast." An uneventful delivery occurred at the expected time and the patient did well postpartum. She did not breast-feed the baby.

When her baby was 3 months old, the patient again visited her physician, this time reporting some "soreness in the left breast." Examination revealed what her doctor thought was an area of increased nodularity with some evidence of inflammation. Repeat mammogram reported "significant change since last exam" and suggested biopsy. A careful review of the earlier films revealed some suggestion of a mass.

The primary care physician then called the patient's surgeon into consultation. His examination revealed a 5-cm mass with a palpable axillary node. Excisional biopsy was followed by a modified radical mastectomy. Pathology reported a large carcinoma of the left breast, and 15 of 23 nodes were positive.

A lawsuit was filed charging both the ob/gyn and the radiologist with negligence. The complaint alleged that the ob/gyn was negligent for not more aggressively following the patient. The radiologist was charged because he had not followed up on the management of the patient since he had recommended "repeat examination should be considered in three months." During the litigation, the radiologist was dismissed on summary judgment. The jury found for the patient, with a large monetary award.

Loss Prevention Comments

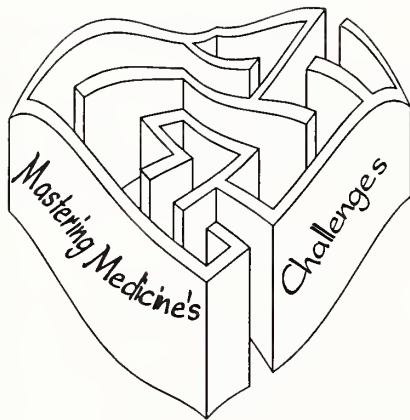
Though two physicians were involved in the management of this patient, the court considered that there was no negligence in the radiologist's initial interpretation of the mammogram even though a subsequent mammogram revealed a suggestion of a mass, and this physician was dismissed from the litigation on summary judgment.

The ob/gyn's medical record revealed an almost casual approach to the management of his patient, whom he found to have an area of "diffuse nodularity" in her left breast. He saw the patient repeatedly without focusing his strict attention on the left breast and recording a careful examination. The record seemed to suggest that the physician shifted the responsibility of carefully watching the left breast to the patient and did not take his own responsibility seriously enough. More than a year had elapsed since the recommendation of "repeat examination in three months," and still the primary care physician had taken no positive action.

Perhaps the most important error made by the ob/gyn was that he did not involve in this case a specialist who would definitively manage the breast mass. It is very doubtful that a primary care physician should ever assume the responsibility for following a patient of this type without the input of the physician who will do surgery if it becomes the treatment of choice.

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in March 1988. It is reprinted here with permission.

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J. David Talley, M.D.*

THE COMPLETE CARDIAC DIAGNOSIS

The Complete Cardiac Diagnosis encompasses the etiology, anatomy, and physiological manifestations of all cardiovascular diseases. In the complete cardiac diagnosis each cardiovascular condition is examined independently and in relation to coexisting problems. This structure is a method to refine diagnostic criteria and focus investigative techniques. The ninth edition of the Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Great Vessels was published in 1994 and this discussion will review this update.

The New York Heart Association initially published criteria for diagnosing cardiac disease in 1928. Since then, many modifications have been made to the classification that reflect important advances in understanding the biology of cardiovascular diseases, and development of diagnostic and therapeutic methods. While subtle changes reflecting advancement of cardiovascular disease have been made since the eighth edition published in 1979, the basic tenants remain.

Cardiovascular disease remains a delicate fabric of five fibers: *etiology*, *anatomy*, *physiology*, *functional capacity*, and *objective assessment*. An example of the Complete Cardiac Diagnosis is seen in *Table 1* on the next page. This structured format provides complete assessment of the cardiovascular problem and decreases the probability of inappropriate therapeutic management.

The essential diagnostic criteria of a cardiovascular disease is the *etiology* category of the Complete Cardiac Diagnosis. The diagnostic criteria vary in degree of sophistication from astute clinical observations to complex technological studies. For example, hypertensive cardiovascular disease is present when there is "evidence of left ventricular hypertrophy or failure in the presence of sustained systemic arterial systolic and diastolic hypertension."¹ Refined criteria are necessary when the diagnosis of heart disease due to homocystinuria is entertained. Here, the diagnosis is cinched when "myocardial infarction due to coro-

nary thrombosis in an individual with at least two of the phenotypic characteristics of the syndrome of homocystinuria and biochemical evidence of absent or decreased activity of cystathionine beta-synthase."²

The *anatomy* category is the image of the cardiovascular structure. Echocardiography, computed tomography, magnetic resonance imaging, or cardiac catheterization may obtain this image. It also includes what is "done" to the structure of the heart such as coronary angioplasty, coronary artery bypass graft surgery, valve repair or replacement, or transplantation.

The *physiology* section includes normal and pathologic cardiovascular function. It is the action of the heart. Examples of important physiological manifestations include the electrocardiographic ventricular tachycardia, echocardiographic valvular regurgitation, and hypotension due to an extensive anterior MI.

The chief complaint or presenting symptoms of the cardiovascular disease are reflected in the *functional capacity* section of the Complete Cardiac Diagnosis. There are four grades used in assessing the degree of the severity of symptoms (*Table 2 on next page*). The mildest degree of symptoms (Class 1) is those that occur on with extreme, not ordinary, physical activity. Symptoms that occur at rest are in Class IV.

The final category of the Complete Cardiac Diagnosis is the *Objective Assessment*. This section ties together the complex interplay of the preceding categories: *etiology*, *anatomy*, *physiology*, and *symptomatic severity*. There are four grades of severity of disease: A) no disease, B) minimal disease, C) moderate disease, and D) severe disease.

Use of the Complete Cardiac Diagnosis is essential in today's health care environment. It fosters communication of the cardiovascular conditions for all levels of health care providers, provides a structure for precise understanding of essential diagnostic criteria of each cardiovascular problem, and allows a global overview of multiple interrelating cardiovascular problems.

* Dr. Talley is Professor of Internal Medicine & Associate Director, Division of Cardiology, UAMS.

Table 1. An Example of the Complete Cardiac Diagnosis*

1. Heart Disease

Etiology: coronary atherosclerosis

Anatomy: A. Cardiac catheterization →
100% stenosis proximal left circumflex coronary artery, 80% stenosis of mid- and distal right coronary artery.

B. PTCA →
mid-RCA 80-30%, distal RCA 70-20%, LCx 100-30%

Physiology: A. Sinus pause →
Temporary transvenous pacemaker placed

B. Cardiac catheterization →
Left ventricular function approximately 40-45%,
C. Second degree atrioventricular block, Mobitz Type I, resolved without treatment

D. Pericarditis →
Treated with a non-steroidal anti-inflammatory agent

E. Post-PTCA dipyridamole-thallium stress test →
inferior infarct in the distal LCx distribution, inferior ischemia in the distal RCA distribution

Functional Capacity: Class III. Marked limitation of physical activity

Objective Assessment: C. Moderately severe cardiovascular disease

* Per New York Heart Association definitions

Abbreviations: LCx = left circumflex, PTCA = percutaneous transluminal coronary angioplasty, RCA = right coronary artery

Table 2. Functional Capacity and Objective Assessment of the Complete Cardiac Diagnosis

	<u>Functional Capacity</u>		<u>Objective Assessment</u>
Class I.	Patients with cardiac disease, but without resulting limitations of physical activity. Ordinary physical activity does not cause undue fatigue, palpitations, dyspnea, or anginal pain.	A.	No objective evidence of cardiovascular disease.
Class II.	Patients with cardiac disease resulting slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea, or anginal pain	B.	Objective evidence of minimal cardiovascular disease.
Class III.	Patients with marked limitation of physical activity. They are comfortable at rest. Less than ordinary activity causes fatigue, palpitation, dyspnea, or anginal pain.	C.	Objective evidence of moderately severe cardiac cardiovascular disease.
Class IV.	Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of heart failure or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.	D.	Objective evidence of severe cardiovascular disease.

References:

1. The Criteria Committee of the New York Heart Association. Nomenclature and criteria for diagnosis of diseases of the heart and great vessels. 9th ed. Boston: Little, Brown and Company, 1994;15.

2. The Criteria Committee of the New York Heart Association. Nomenclature and criteria for diagnosis of diseases of the heart and great vessels. 9th ed. Boston: Little, Brown and Company, 1994;14.

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antibiotics. Your doctor even
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to feel good again. God bless you.

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State Health Watch

Information provided by the Arkansas Department of Health

Carbon Monoxide Poisoning

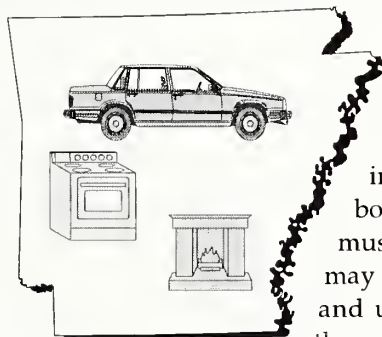
There are approximately 600 deaths annually in the United States due to unintentional carbon monoxide (CO) poisoning. Arkansas has experienced 69 deaths from CO poisoning for the ten-year period of 1983-1992. With winter weather approaching, the risk for CO poisoning increases and there needs to be an increased awareness of this potential health hazard.

The major sources of exposure to the fatal cases in Arkansas are as follows; motor vehicle exhaust gases, 28.9%; incomplete combustion in domestic stoves or fireplaces, 21.7%; gas pipelines, 18.8%; CO not specified 15.9%. The above four sources of exposure accounted for 85.3% of CO deaths. Nonfatal CO poisoning is not reportable in Arkansas.

A surveillance system implemented by the Colorado Department of Health in 1985 has helped to characterize the epidemiology of fatal and nonfatal CO poisonings. Findings from this system indicated that during 1986-1991, the primary cause of 1149 CO poisonings in Colorado were furnaces in residential settings (40%), automobile exhaust (24%), and fires (12%). Furnaces were the source of CO in 46% of nonfatal CO poisonings but only 10% of fatal poisonings, suggesting that the primary sources of CO associated with nonfatal poisonings differ from those for fatal cases. In addition, findings from the Colorado surveillance system indicate that mortality data may underestimate the importance of furnaces as a source of CO in residential settings.

Other studies also have documented that furnaces are important sources of CO in residential CO poisonings. For example, of the 38 residential correlated episodes investigated in West Virginia during 1978-1984, furnaces or space heaters were implicated in most (89%) incidents; 94% of the faulty units were fueled by methane or butane. In Connecticut, although most (75%) CO poisonings were caused by faulty furnaces, oil-fueled furnaces were the source of CO more often than natural gas - possibly reflecting a higher percentage of

oil- or kerosene-fueled furnaces in homes in New England (51% in homes in New England compared with 6% in the Midwest, 7% in the South and 2% in the West). In addition, based on the 1990 census, the distribution of furnace types identified as sources of CO in this survey is representative of the distribution throughout Connecticut (gas furnaces, 28%, and oil or kerosene furnaces, 54%).¹



The most common signs of CO poisoning include headache, nausea and, on occasions, breathlessness. Following these initial signs, should the individual continue to remain in the carbon monoxide laden environment, then muscle weakness, dizziness, and confusion may occur. This can progress into stupor and unconsciousness. There is a phase in the poisoning where the individual is aware of their surroundings and what is occurring but unable to respond to their circumstances due to extreme muscle weakness.²

Normal metabolic processes within the body will result in a carboxyhemoglobin (COHb) level of 0.5% to 1.0%. In non-smokers, the average COHb level is 1.2% to 1.5%. Cigarette smokers will have a COHb level of 3% to 4%, but can be as high as 10% in heavy smokers. COHb levels of 10% or less can impact the neurobehavioral and cardiovascular systems. No adverse health effects have been reported below 2.0% COHb.³

References

1. CDC, Unintentional Carbon Monoxide Poisonings in Residential Settings, MMWR, October 20, 1995, Vol. 44, No. 41, pg 766.
2. Zenz, Carl, MD, Occupational Medicine, Principles and Practical Applications, 2nd Edition, 1988, pg 505.
3. USEPA, Introduction to Indoor Air Quality: A Reference Manual, EPA/400/3-91/003, July 1991, pg 50.

Influenza Update

During the 1995-1996 influenza season, reports on influenza will be included in *The Journal*. These reports will include information on influenza in Arkansas and the United States. Arkansas information will include the type and location by county.

Arkansas - Through November 1995, the Arkansas Department of Health has received reports of influenza type A (not subtyped) from Crawford and Washington Counties. A specimen submitted from Pulaski County in early December cultured out influenza type B.

United States - Through November 1995, influenza has been laboratory-confirmed in 30 states. Influenza A(H1N1) has been reported from 11 states, type A(H3N2) from 7 states, A(not subtyped) from 17 states and influenza B from 5 states.

More information on influenza in Arkansas may be obtained by calling the Arkansas Department of Health, Division of Communicable Disease & Immunization at (501)661-2784.

Reported Cases of Selected Reportable Diseases in Arkansas Profile for October 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases October 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	9	124	162	117	187	130
Giardiasis	13	103	108	128	126	150
Shigellosis	8	100	169	170	193	201
Salmonellosis	39	283	485	372	534	402
Hepatitis A	64	546	225	62	253	74
Hepatitis B	7	68	50	81	60	90
HIB	1	6	4	8	6	8
Meningococcal Infections	4	29	44	24	55	27
Viral Meningitis	1	29	58	71	62	79
Lyme Disease	0	8	15	8	15	8
Rocky Mountain Spotted Fever	0	29	18	16	18	17
Tularemia	0	20	20	36	23	36
Measles	0	2	1	0	5	0
Mumps	2	7	5	9	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	588	4482	6123	6754	7078	7590
Syphilis	93	894	1078	1357	1324	1612
Legionellosis	0	3	14	6	16	6
Pertussis	1	40	32	16	33	17
Tuberculosis	38	197	198	165	264	209

A New HIV/AIDS Drug

The FDA approved 3TC (Lamivudine, Epivir) in late November of 1995. This drug is another reverse transcriptase inhibitor and is recommended to be used for therapy in combination with Retrovir (AZT) when antiretroviral therapy is warranted or there is immunological evidence of disease progression.

The Epivir/AZT combination therapy shows great promise in significantly reducing HIV levels and increasing the number of CD4 cells in HIV positive patients, regardless of their previous exposure to AZT. Single therapy with AZT, DDI or 3TC did not accomplish these results. The positive effects of the combination therapy was shown to persist for almost a year in some study participants. Side effects with the combination therapy were no greater than if they were only taking AZT.

Epivir is marketed by GLAXO WELLCOME Pharmaceuticals. The adult and adolescent (12-16 years) recommended oral dose is 150 mg BID in combination with AZT. For adults weighing less than 50 kg, or 110 lbs., the recommended oral dose is 2mg/kg BID in com-

bination with AZT. There is no recommendation of dosage for adolescents weighing less than 50 kg. Dosages must be adjusted in accordance with renal function in persons over 16 years of age.

The recommended oral dose for patients 3 months to 12 years is 3 mg/kg BID, to a maximum of 150 mg. BID, in combination with AZT. One open-label uncontrolled study has been conducted in children receiving Epivir monotherapy. Fourteen percent developed pancreatitis while 13% developed paresthesias and peripheral neuropathies. There are no data on the use of Epivir in combination with AZT in pediatric patients.

Epivir is already available in some local pharmacies and is being made available through the Arkansas Department of Health consortia for eligible patients. Call Lola Thrower at 661-2408. For additional information about other experimental or approved drugs call the AIDS Treatment Data Network at their nationwide, toll-free treatment access program at (800) 734-7104. ■

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Arkansas HIV/AIDS Report

1983-1996

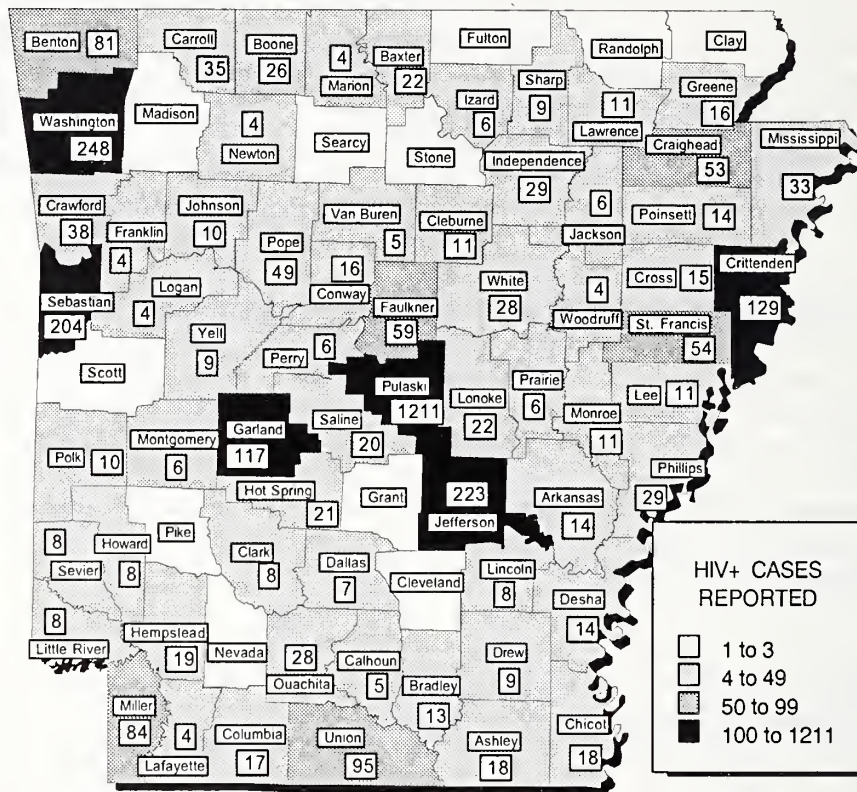
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



County of residence at the time of test for the 3,380 Arkansans reported to be HIV+. (11/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	315	2,802	83
	Female	8	26	37	68	85	81	94	90	89	578	17
AGE	<5	1	1	2	8	13	6	3	7	2	43	1
	5-12	0	1	1	5	1	2	1	0	1	12	0
	13-19	0	7	8	14	19	25	11	22	12	118	4
	20-29	33	110	123	183	149	156	175	145	119	1,193	36
	30-39	44	86	104	196	208	179	168	171	168	1,324	39
	40-49	22	25	35	56	70	67	65	77	65	482	14
	>49	8	6	11	17	22	38	23	35	37	197	6
RACE	White	87	170	174	328	298	293	278	259	245	2,132	63
	Black	21	69	108	151	184	173	163	184	148	1,201	35
	Hispanic	0	1	2	1	3	4	1	7	3	22	1
	Other/Unknown	0	1	1	1	0	3	4	7	8	25	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	134	1,694	50
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	41	512	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	22	233	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	87	42	476	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	4	44	1
	Undetermined	1	20	35	41	23	12	9	35	160	336	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	404	3,380	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996

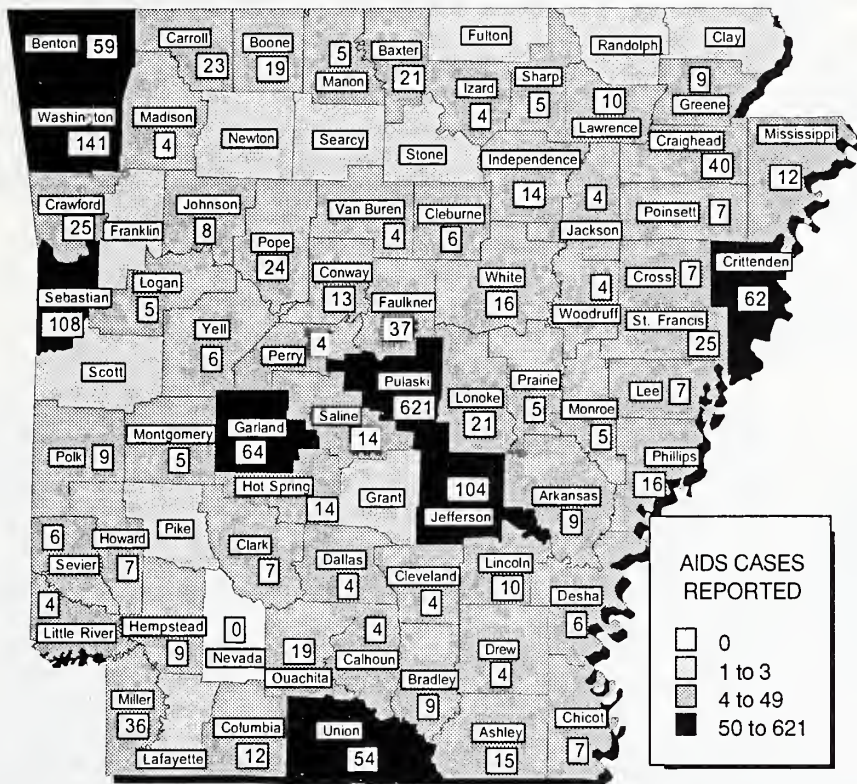
AIDS In Arkansas

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Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.


NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



Of the 3,380 Arkansans reported to be HIV+, 1,866 have been diagnosed with AIDS. (11/12/95)

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	209	1,626	87
	Female	5	6	10	20	25	35	64	42	33	240	13
AGE	<5	0	1	1	6	6	3	2	1	2	22	1
	5-12	0	1	0	1	1	0	1	0	2	6	0
	13-19	0	0	0	4	3	2	4	3	1	17	1
	20-29	31	27	24	55	57	81	110	67	49	501	27
	30-39	39	36	41	78	80	128	178	133	108	821	44
	40-49	15	10	7	35	41	52	78	61	46	345	19
	>49	5	8	7	11	13	19	27	30	34	154	8
RACE	White	74	61	58	141	134	206	275	190	153	1,282	69
	Black	16	20	21	47	66	75	121	102	86	554	30
	Hispanic	0	1	0	0	1	3	3	2	3	13	1
	Other/Unknown	0	1	1	2	0	10	10	1	0	7	0
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	112	1,105	60
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	37	272	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	18	152	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	17	172	9
	Transfusion	2	7	3	7	11	3	2	4	2	41	2
	Perinatal	0	1	1	6	6	3	3	1	3	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	34	2
	Undetermined	0	2	1	3	1	2	2	9	46	66	3
AIDS CASES BY YEAR		90	83	80	190	201	284	400	295	242	1,866	100

Arkansas Department of Health HIV/AIDS Surveillance Program



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David, Alex Stanley, Nephrology. Medical Education, UAMS, 1990. Internship/Residency, UAMS, 1991/1993. Board certified.

Fiser, Debra Henry, Pediatrics. Medical Education, UAMS, 1977. Internship/Residency, University of Kentucky in Lexington, 1978/1980. Fellowship, University of Florida, Gainesville, 1981. Board certified.

Garrett, Nina N., Gastroenterology. Medical Education, University of Texas Health Sciences, Houston, 1989. Internship/Residency, Emory University, 1990/1992. Board certified.

Johnsrude, Christopher L., Pediatric Cardiology. Medical Education, East Carolina University School of Medicine, Greenville, North Carolina, 1988. Internship/Residency, Cincinnati Children's Hospital Medical Center, 1989/1991. Fellowships, Texas Children's Hospital, 1995. Board certified.

Lewis, Gregory James Stakesby, Radiology. Medical Education, University of Iowa College of Medicine, Iowa City, 1985. Residency, University of Arkansas Medical Center, 1989. Board certified.

Taylor, Juanita "Lynn," Psychiatry. Medical Education, UAMS, 1982. Internship/Residency, University Hospital, Little Rock, 1983/1987.

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Robinson, Matthew Miles, Urology. Medical Education, University of Texas Health Science Center, San Antonio, 1990. Internship/Residency, UAMS, 1991/1995.

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Eskandar, Ziad, Internal Medicine. Medical Education, Damascus University School of Medicine, Syria, 1990. Internship, Jersey City Medical Center, New Jersey, 1993. Residency, St. Agnes Hospital, Maryland, 1995. Board certified.

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Blakely, Brent Michael, Anesthesiology. Medical Education, UAMS, 1991. Internship/Residency, UAMS, 1992/1995.

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Chavin, Michael Alan, Anesthesiology. Medical Education, Rush Medical College, Chicago, Illinois, 1983. Internship, University of California, San Diego, 1984. Residency, University of Miami, Jackson Memorial Hospital, 1985 and Rush Presbyterian St. Luke's Medical Center, Chicago, Illinois, 1987. Board certified.

VAN BUREN

Heaver, Holly M., Internal Medicine. Medical Education, University of Oklahoma - Tulsa Medical College, 1987. Internship/Residency, University of Oklahoma - Tulsa Medical College, 1984/1987. Board certified.

RESIDENTS

Eyre, Marion Donald, Otolaryngology. Medical Education, University of Louisville, Kentucky, 1995. Residency, UAMS, 2000.

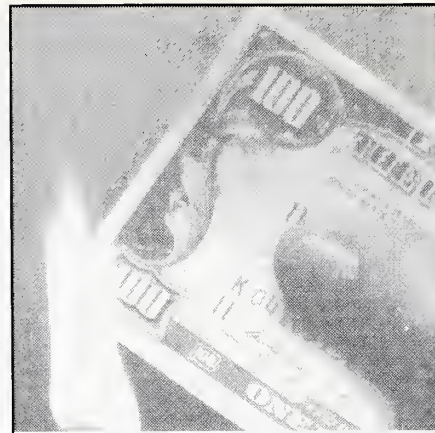
Moore, Jesse Daniel, Family Practice. Medical Education, UAMS, 1993. Internship/Residency, Texarkana - AHEC Southwest, 1994/1996.

Palmer, Kristine Gill, Pediatrics. Medical Education, Louisiana State University, Shreveport, 1994. Internship/Residency, UAMS - Arkansas Children's Hospital, 1995/currently.

STUDENTS

Brian Francis Liebersbach
Kristen N. Morehead

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New Member Profile



David S. Siegel, M.D., Ph.D.

PROFESSIONAL INFORMATION

Specialty: Bone Marrow Transplantation; Hematology/Oncology

Years in Practice: Three

Office: UAMS

Medical School: New York University Medical College, 1986

Internship/Residency: NYU/Bellevue Hospital Center, 1987/1989

Honors/Awards: ASCO Young Investigator - 1993

PERSONAL INFORMATION

Wife: Rena Feinman, Ph.D.

Daughters: Avital - 5 years old and Ariel - 2 1/2 years old

Date/Place of Birth: September, 17, 1956, New York, N.Y.

Volunteer Work: Sunday School

Hobbies: woodwork, chess, ping-pong, basketball

THOUGHTS

If I had a different job, I'd be: A carpenter

Worst Habit: I eat too much

Best Habit: I eat too much

Behind my back, they say: He should lose some weight

Most valued material possessions: Judaica collection

The turning point of my life was when: I met my wife

Favorite vacation spot: Cape Cod, Massachusetts and Israel

One goal I haven't yet achieved: Curing Multiple Myeloma

Favorite childhood memory: Climbing sand dunes in Cape Cod

When I was a child, I wanted to grow up to be: A physician

One of my pet peeves: Saying "I'm fixin' to"

First job: Bicycle mechanic

Worst job: Pizza delivery boy

My life philosophy: Do unto others as you would have them do unto you...

The New Member Profile is a new feature in *The Journal of the Arkansas Medical Society* and will appear periodically. In addition to this new feature, *The Journal* will also host a feature for regular members. If you are interested in appearing in either the *New Member Profile* or *Member Profile*, contact Tina Wade at the Arkansas Medical Society at (501) 224-8967 or 1-800-542-1058.



Outdoor MD

Information provided by
the Arkansas Game & Fish Commission

Pine Bluff pre-med student wins Foundation's bass boat

Gabe Galster's participation in bass tournaments will likely take a new slant now that he's the owner of a shiny new Ranger bass boat rig.

Galster, 20 and a Pine Bluff resident now living in Little Rock and attending the University of Arkansas at Little Rock, won the boat before the holidays at the Arkansas Outdoor Hall of Fame banquet sponsored by the Arkansas Game and Fish Foundation.

Proceeds from the banquet will be used to complete payment for the Robinwood Tract, an addition to the Wattensaw Wildlife Management Area on the White River in Prairie County.

Galster, a college sophomore in a pre-med program, said, "I'm always hunting and fishing. That's what I do on the weekends."

The son of Mike and Vali Galster, he said his special interests, along with bass fishing, are fly fishing on the Little Red River in north-central Arkansas, spearfishing, duck hunting and squirrel hunting. "I also like to canoe and fish for smallmouth bass on the Buffalo River and the Caddo River."

Galster and his parents said the winning of the \$20,000 bass boat rig was a turnaround from some recent "disasters" in their outdoor activities.

"We had a deep sea boat struck by lightning while we were driving down the highway. That's unusual, but we got it fixed, then later it burned to the waterline over at Lake Ouachita. And last year, we had our (Chevrolet) Suburban blow up on the way to elk hunt in Colorado. So it really feels good to win something. I think the only thing I ever won before was a hat at a Ducks Unlimited banquet one time," Galster said.

Alcohol, jet skis are prominent in Arkansas boat accidents

Marvin "Butch" Potts, boating safety coordinator for the Arkansas Game and Fish Commission, said 1995 was marked by an alarming rise in accidents involving personal watercraft, often called jet skis. He said Arkansas boaters as a whole have been good about obeying the new regulations passed in early 1995 by the Legislature, including use of life jackets.

From January through September of 1995, there were 63 boating accidents reported, with eight deaths and 31 injuries. Four deaths and 10 injuries resulted from accidents involving alcohol, Potts said. Ten of the accidents were collisions between two personal watercraft. The small, speedy vessels were involved in 25 accidents, resulting in two persons killed and 17 hurt.

Red Slough Waterfowl Rest Area

A wintering waterfowl rest area in southwest Arkansas, built by four public and private agencies, was dedicated recently.

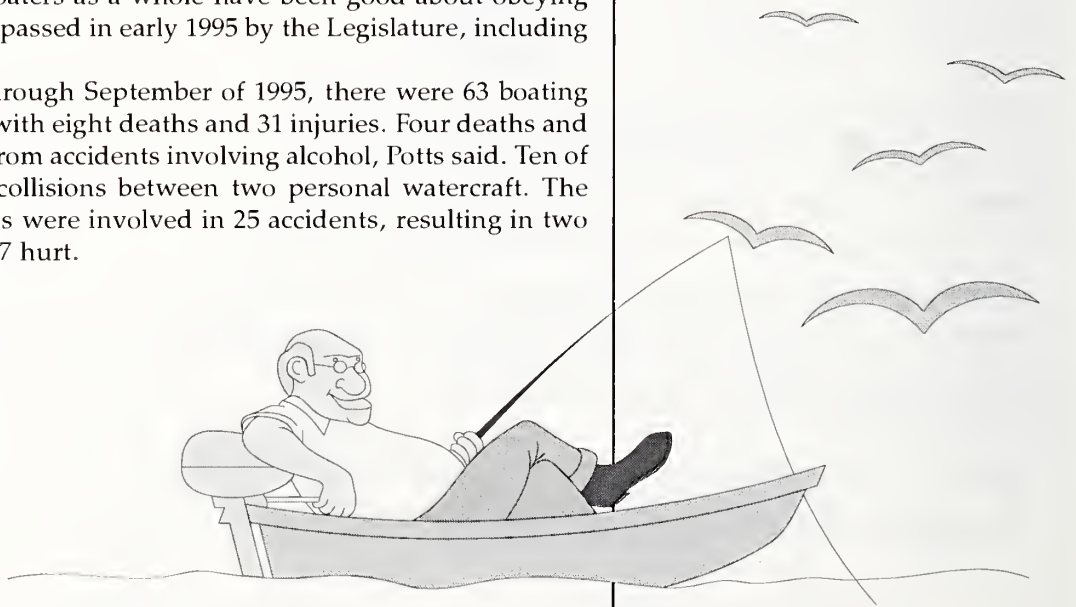
Red Slough Waterfowl Rest Area covers 185 acres on the southern portion of the Arkansas Game and Fish Commission's Bois d'Arc Wildlife Management Area in Hempstead County southwest of Hope. Red Slough is reached off Arkansas Highway 355 by a road around the perimeter of Bois d'Arc Lake.

It will benefit ducks, from both the Central Flyway and Mississippi Flyway, that spend the winter in the area or stop over on migration flights to the Gulf Coast and other points. The rest area was created by the building of a mile-long levee and installing of several L-shaped water control structures called flashboard risers.

Water is provided by an innovative siphon system which brings in water from nearby Bois d'Arc Lake.

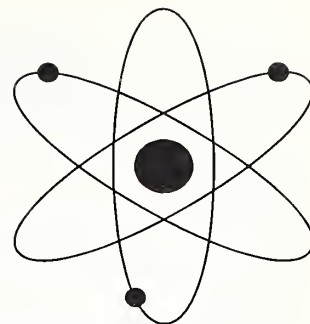
Red Slough Waterfowl Area was constructed by a partnership of the Game and Fish Commission, Hempstead County Natural Resources Conservation, Ducks Unlimited and the Arkansas Wildlife Federation. It will also benefit other game and nongame wildlife.

The rest area and its access road cost \$150,000, with much of the money coming from mitigation funds.



Radiological Case of the Month

John DeLoach, M.D.
John Hayes, M.D.
Michael Stair, M.D.
Frank Ludwig, M.D.
David Bevans, M.D.
Charles Fielder, M.D.
David Harshfield, M.D.



HISTORY:

This 57 year old female was referred for work-up of a faint, almost imperceptible density seen on a screening mammogram (figure 2). Although subtle, this density had increased in conspicuity compared to prior mammograms. The lesion could not be seen with ultrasonography and was classified as "indeterminate." The patient underwent stereotactic core biopsy for diagnosis.

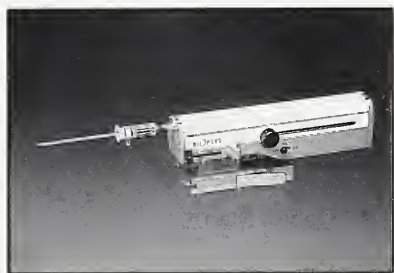


Figure 1



Figure 3



Figure 4



Figure 2

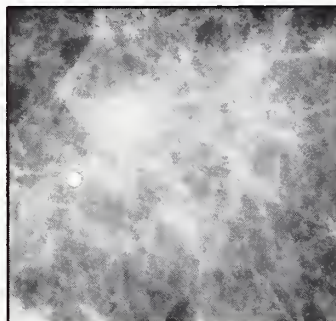


Figure 5

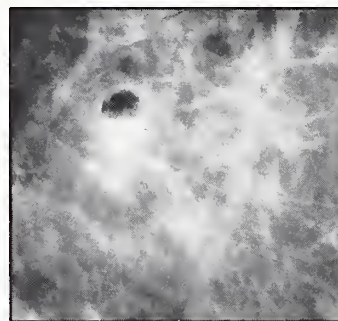


Figure 6

FIGURE 1: The Mammotome Biopsy System is designed to facilitate stereotactic core biopsy of difficult lesions such as microcalcifications. With its unique single-insertion technology, the Mammotome System enables the physician to rapidly obtain multiple core specimens with a single insertion. This advanced technology permits the sampling notch to be repositioned in vivo for selective tissue sampling. The Mammotome System demonstrates consistently superior histologic specimens and is compatible with any stereotactic prone table.

FIGURE 2: A localization scout mammogram in the cranio-caudal dimension. The lesion is barely visible (black arrows).

FIGURE 3 and 4: Represented are stereotactic images from two angles, 30 degrees apart. The needle has been placed in the center of the faintly visible lesion. A metallic marker can also be seen on both images. This is a small "B" placed on the surface of the skin which aids the technologist in positioning the patient.

FIGURE 5 and 6: Pre-biopsy scout image (figure 5) with lesion enhanced by digital post processing, compared with post biopsy image (figure 6) showing most of the lesion has been removed leaving only a small air collection and no hematoma.

Ductal carcinoma in situ

DIAGNOSIS:

Ductal carcinoma in situ.

DISCUSSION:

Surgical Biopsy vs. Core Biopsy - Open surgical biopsy was the commonly used method for diagnosis of breast cancer for more than 20 years. For small abnormalities, radiologists use a needle to insert a localization wire; this wire guides the surgeon to the abnormal tissue during surgery. Ideally, the wire can be placed within one centimeter of the lesion; in practice, however, factors such as the size of the breast and the type of imaging used can make placement less accurate.

Once the localization wire is in place, the surgeon dissects the tissue around the wire, removing the wire and the tissue. A radiologist often then radiographs the sample tissue to locate the lesion within it.

Each of these steps contains a margin of error. The radiologist placing the localization wire may miss the lesion; the surgeon, following the wire "blind," may miss the abnormal tissue; and the pathologist may not select and evaluate the appropriate tissue. Various studies report the "miss" rate for surgical biopsies at 1 percent to 10 percent. In addition, the process leaves a two-inch scar and may disfigure the breast.

Core Biopsy - Large-core breast biopsy offers substantial advantages over surgical biopsy. A core biopsy is one-fourth to one-third the cost of a surgical biopsy and can be set up and performed more quickly. The complication rate is negligible and no adverse cosmetic results have been reported after core biopsy. Core biopsy is well tolerated, and the patient does not lose additional time from work, which in turn reduces the cost to society. Most patients are able to return to work or the activities of daily life immediately after a core biopsy has been performed.

Percutaneous Biopsy - A percutaneous breast biopsy is a non-surgical procedure for collecting abnormal breast tissue specimens. The physician makes a tiny nick in the skin, through which a device is inserted to obtain tissue from the abnormal area or lesion.

In a standard core biopsy, multiple passes through the skin are made using a needle with an inner grooved stylet and an outer cutting cannula, commonly called a Tru-Cut needle. Each insertion captures a core sample.

In contrast to standard core biopsy, the newest technology, the Mammotome Biopsy System, makes only one insertion through the skin into the breast. It gathers samples by using a gentle vacuum to repeatedly draw tissue into the hollow chamber of a probe.

Percutaneous biopsy is done with the aid of guided imaging. Stereotactic imaging takes X-ray pictures from two angles, 30 degrees apart.

During this biopsy procedure, the patient lies face down on a special table with an opening through which the breast protrudes. The physician's "work space" resides under the table, out of the patient's view. The breast is compressed, as for a mammographic screening. Two stereotactic X-rays are taken, from which a computer can calculate the exact location of abnormal tissue. A local anesthetic is applied, and a tiny nick is made in the breast where the biopsy probe will be inserted. The computerized imaging system guides the probe to the precise location of the lesion.

In a standard core biopsy, a needle is "fired" into the lesion to obtain a core sample for analysis. To ensure adequate sampling, the lesion is approached from different angles and many core samples are taken. The needle must be removed from the breast after each core is taken and re-inserted for the next sample. The procedure is less effective in sampling breast lesions.

Tru-Cut needle technology has long been used in obtaining biopsy samples from organs other than the breast, such as the prostate for which it was originally designed. In 1988, it was adapted for use in sampling lesions in the breast.

Percutaneous Biopsy using the Mammotome - The Mammotome Biopsy System represents a wholly new approach to sampling lesions in the breast. Rather than adapting technology used to biopsy other organs of the body, as Tru-Cut needle technology did, the Mammotome system was developed specifically for the use in the breast.

One of the Mammotomes greatest benefits lies in its ability to effectively biopsy early stage breast cancer such as microcalcifications. Found during mammographic screenings, microcalcifications may be less than a millimeter in size and clustered together in an area less than 5mm in size. In approximately 40 percent of women under age 40, microcalcifications are the only indication of early breast cancer. Where other biopsy instruments may fail to capture sufficient tissue surrounding microcalcifications, the directional Mammotome probe is able to efficiently biopsy them.

The physician and patient can be confident that the suspicious area is thoroughly biopsied.

The Mammotome system is comprised of a disposable probe and a motorized driver. The probe is configured with a piercing tip, sampling notch, cutter, thumbwheel, vacuum and specimen collection chamber, and the probe is housed in the driver (see Figure 1). While the probe remains in the breast, its sampling notch may be rotated in a full circle. Because the sampling notch is directional, it can obtain multiple specimens without having to be repeatedly removed and inserted.

The vacuum gently draws tissue into the notch, where it is severed by a high-speed rotating cutter. It is then transported to the collection chamber outside of the breast. Using the thumbwheel, the physician rotates the notch to the desired position and the procedure is repeated. Typically, 8 to 12 samples allow a thorough diagnostic evaluation of the suspected abnormality.

Unlike all other commercially available biopsy devices, the Mammotome technology offers several advantages to physicians. First, it saves time because the probe is inserted just once. Second, the Mammotome can be used to secure at least a 200 to 300 percent larger specimen. In addition, the amount and quality of the tissue allow the pathologist to make a definitive histologic assessment of the lesion.

REVIEW

There are now many interventional tools at the disposal of the modern breast specialist, including aspiration, abscess drainage, needle localization, galactography, and percutaneous biopsy. However, these tools need to be used wisely in a logical, stepwise progression to a definitive diagnosis. By following the appropriate critical pathways of breast intervention, the breast specialist now has many options for breast diagnostic work-up before having to resort to open surgical biopsy.

The critical pathways for breast intervention depend on the mammographic appearance of the lesion. By dividing breast lesions into three categories - round or oval nodules, irregular or spiculated masses and asymmetric opacities or microcalcification lesions - the specialist can use different diagnostic and interventional tools to determine whether a biopsy is necessary and, if so, what approach to use for that biopsy. The same tools that the specialist uses to determine the nature of non-palpable lesions can and should also be used for palpable lesions. In fact, since the term palpable represents a spectrum of clinical findings from "vague thickening" to a "rock hard, immovable mass," a good radiologic work-up that includes high-quality breast ultrasound should be performed to discriminate among the lesions of this palpable spectrum. Since most palpable lesions subjected to breast ultrasound represent only simple cysts, "fibrocystic change," or fibroadenomas, the patient does not require a biopsy of any kind.

When a biopsy is indicated, however, most specialist now use the automated large-core technique with either stereotactic or US guidance. Most pathologists are comfortable interpreting core specimens, and the histologic results obtained allow more definitive benign and malignant diagnoses compared with fine-needle aspiration. Although many specialists are now comfortable with automated core biopsy of the breast, it has become clear that five or more cores are necessary in nodular lesions and 10 or more cores are needed in cases of microcalcifications to limit sampling error.

As a result of the need for multiple, time-consuming core acquisitions, a new device has been introduced (Mammotome; Biopsy Medical, San Juan Capistrano, Calif) that allows a greater amount of breast tissue to be harvested in a much shorter time. Results of clinical trials were recently presented at The American College of Surgeons 81st Clinical Congress in October and at the 1995 Radiology Society of North America

meeting in Chicago. The Women's Center at Riverside Imaging Center is one of the clinical test sites for Biopsy. Eight malignancies were discovered in the initial 50 patients utilizing the Mammotome system (16%). Riverside Imaging Center utilizes the digital upgrade to the standard Fischer Stereotactic Biopsy table to reduce the entire biopsy time to less than thirty minutes. Our pathologist can provide an initial diagnosis by touch-prep technique so that results are available to the physician and patient within a few hours after the procedure. All of these new biopsy devices will soon be commercially available.

We have found this device to be especially useful in cases of microcalcifications. Because it is essential to obtain at least some of the calcifications in question, the conventional biopsy gun technique requires acquisition of 10 or more conventional cores and up to an hour (sometimes even more) of the specialist's time. With the Mammotome, larger samples are obtained through the same size skin opening as made by a 14 gauge needle, because the probe of the Mammotome does not have to be removed from the breast after each sample acquisition, the specialist can complete the requisite acquisition of microcalcifications in 5-10 minutes. This capability will certainly streamline percutaneous breast biopsy at a time when with managed care and capitation few physicians will be able to spend an hour or more on a biopsy.

Following the critical pathways for cyst aspiration, ductography, abscess drainage and percutaneous biopsy, most breast problems that still linger after the imaging work-up can now be definitively resolved without open surgical biopsy.

CONCLUSION

There is no question that percutaneous large core needle biopsy is here to stay. The experience at Riverside Imaging Center, along with the reported results of a growing number of published studies, corroborate the fact that 14 gauge core biopsy is an accurate substitute for surgical biopsy of most breast lesions. In this last year, 180,000 women were diagnosed with breast cancer. For every one of those 180,000 women with cancer confirmed by surgical biopsy, an additional four women underwent surgical biopsy of a benign lesion. Percutaneous large-core biopsy instead of surgical biopsy would be equally as accurate and could save the health care system at least one billion dollars a year. The cost of stereotactic core biopsy is 25% to 33% of the cost of surgical biopsy. Before our clinic adopted core biopsy, patients who were advised to undergo surgical biopsy waited for an appointment with the surgeon and then subsequently had to wait for scheduling with the hospital operating room. Our philosophy is to circumvent all the waiting which confronts patients and their physicians in arriving at a final diagnosis for breast problems. With this new technology, it is not inconceivable that a woman could present for a diagnostic mammogram which shows an abnormality which is not resolved after appropriate adjunct imaging techniques (magnification compression mammograms, ultrasound, etc.). After appropriate clinical consultation and discussing with the patient all the risks, benefits, and alternatives (taking into account the patient's personal situation, health, etc.) the patient could then undergo a stereotactic core biopsy prior to leaving the imaging center. Within two hours the patient could be called with the results of the biopsy. If positive, the patient could then schedule surgery at the soonest available time. If benign, the patient could resume her normal activities without further anxiety or worry. Close adherence to this philosophy relieves patients of the almost intolerable wait for days and even weeks for a surgical biopsy and recovery from that surgical procedure. In addition, this will spare the 80% to 90% of patients whose breast lesions were benign from undergoing the expensive, painful, and sometimes disfiguring surgical biopsies which presently are necessary to find the 10% to 20% of patients with true malignancies. Our "gold standard," mammography, is the most sensitive indicator of breast cancer available to physicians today. Unfortunately, our "best exam" has an 80% to 90% false positive rate. By the use of adjunct imaging modalities such as ultrasound and less invasive biopsy techniques such as the stereotactic biopsy system, we can markedly decrease the down stream costs related to early diagnosis of breast cancer.

Authors: John DeLoach, M.D., John Hayes, M.D., and Michael Stair, M.D., are with the Pulaski Surgery Center and Frank Ludwig, M.D., David Bevans, M.D., and Charles Fielder, M.D., are with North Little Rock Surgery Center.

Editor: David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

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AMS Newsmakers

The medical office of **Dr. Victor Biton** in Little Rock has been selected as one of almost 100 neurology centers nationwide to participate in research studies for the treatment of patients with partial seizures of epilepsy. The treatment features a new investigative medication called vigabatrin, now awaiting FDA approval. For more information, see the *Medicine in the News* section in this issue of *The Journal*.

Dr. Ismail H. Ihmeidan, of the Fort Smith Holt Krock Clinic, has been granted a Certificate of Added qualifications in Neuroradiology by the American Board of Radiology.

For his county and community service, **Dr. Ralph Joseph**, a physician of internal medicine in Walnut Ridge, was recently named 1995 Lawrence County Man of the Year at the annual Walnut Ridge Area Chamber of Commerce banquet.

Dr. Robert McMahon, a gastroenterologist with Columbia Family Clinic in Little Rock, was a guest speaker recently for the State Meeting of the Arkansas Society of Gastroenterology Nurses & Associates. He made a presentation entitled "Putting Things in Place; Esophageal Stents."

Dr. Sandra Denise Bruce Nichols, director of the state health department, was recently honored with the Community Leadership Award by the Little Rock FBI office for her efforts in fighting drug abuse in Arkansas. Dr. Nichols oversees the state Alcohol and Drug Abuse Prevention Bureau, and said she accepted the award on behalf of hundreds of Arkansans working to prevent drug abuse.

Dr. J. Gerald Quirk, chairman of the obstetrics/gynecology department at UAMS, has been presented with the 1995 Person of the Year Award by the Campaign for Healthier Babies. This is the first year the honor has been awarded by the campaign which is a coalition that promotes early prenatal care.

Dr. David H. Roberts of Mountain Home, chief of staff at Baxter County Regional Hospital and in private practice at Mountain Home Radiology consultants, has been named as a fellow of the American College of Radiology. He was named as one of 130 new fellows by the college's board of chancellors during the annual meeting in Boston, Mass.

Dr. Joe Rosenzweig, a retired Hot Springs physician, and his wife Susi were honored recently by a group of Hot Springs residents for their longtime leadership and activities in their church and community. The event, held at the Hot Springs Park Hilton, also kicked off a fund in the couple's names to promote interfaith understanding and local interfaith activities.

Dr. Bernard A. Tisdale, a Fort Smith radiation oncologist affiliated with the Holt Krock Clinic, presented a paper entitled "Primary Radiation Therapy for Adenocarcinoma of the Prostate" during the 89th Annual Scientific Assembly of the Southern Medical Association held in Kansas City, Missouri, in November.

Dr. Rowland Vernon, a Fort Smith surgeon, has been elected president of the BueLingo Cattle Society board of directors. He was elected to office at the annual convention in Dubuque, Iowa.

Seven UACM students were selected by the AMS Alliance to receive the national AMA 1995-96 Education and Research Foundation Scholarship. The scholarships are awarded annually to medical students who demonstrate outstanding academic achievement and "possess the humanitarian skills to become caring and compassionate physicians."



Front row, left to right: Kristy Cowherd, of Crossett; Mrs. Jack Blackshear, AMS Alliance Representative; Paige Cash, of NLR; Vicki Major, of Bigelow. Back row, left to right: Stacey Klutts, of Mountain Home; Brian Blair, of Vilonia; Jeff Conaway, of Little Rock; and Lee Johnson, of Greenwood.

Physician's Recognition Award - The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of October 1995 are: James Douglas Armstrong, Ashdown; Clinton James Fuller, Little Rock; Thomas Wayne Koonce, Little Rock; Douglas F. Smart, Little Rock; Abdalla A. Tahiri, Little Rock and Terrance J. Zuerlein, Little Rock.



left to right: Belinda Burnett and Mr. Fred Reddoch, who presented the award.

Belinda Burnett, a sophomore UACM medical student from Little Rock, has received the Pulaski County Medical Society 1995-96 Scholarship for her outstanding academic achievement, leadership, character and financial need.



left to right: Bryan McDonnell and Dr. Elton Cleveland of the UAMS Dept. of Family and Community Medicine.

Bryan McDonnell, a junior UACM medical student from Hot Springs, has received the Arkansas Academy of Family Physicians Foundation Scholarship.

Medicine in the News

Health Care Access Foundation

As of December 1, 1995, the Arkansas Health Care Access Foundation has provided free medical service to 10,195 medically indigent persons, received 18,871 applications and enrolled 37,593 persons. This program has 1,716 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Exposure to Hepatitis C among Health Care Workers

Unlike the case for HIV and hepatitis B, the risk of occupational transmission of hepatitis C virus to health care workers has not been well defined. A study from 16 urban Italian hospitals sheds light on this issue.

Over 3000 hospital employees—including 1462 nurses, 644 housekeepers, and 512 physicians—were initially tested for hepatitis C antibodies by second-generation tests; 2.2% were positive. Although age over 46, previous transfusion or hepatitis, and employment in housekeeping were significantly associated with a higher seroprevalence rate, risk factors such as a history of occupational needlestick exposures were not. Of the 3006 seronegative employees, 87% were retested a year later, and 3 (0.1%) had seroconverted. None of the 3 recalled occupational exposures.

In addition, 133 health care workers sustained exposures (mostly needlesticks) from sources positive

for hepatitis C. All of the workers were seronegative at the time of the exposure. At six months, one person (a nurse with a needlestick after blood drawing) had seroconverted.

Comment: Transmission of hepatitis C to health care workers is probably rare, but not negligible. However, the three seroconversions among asymptomatic surveyed employees in this study may represent community-acquired infection. Additional large studies from other countries would be welcome.- AS Brett

Puro V; et al. Occupational hepatitis C virus infection in Italian health care workers. Am J Public Health 1995 Sep; 85:1272-5.

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Directly Observed Therapy May Reduce TB Incidence

Tuberculosis has become a serious public health issue, largely because those infected comply poorly with medical regimens. One strategy is directly observed therapy (DOT), in which case managers watch patients until they take all required medication. This descriptive study compared TB trends in Baltimore, which has used DOT since 1978, with those in five other U.S. cities that had comparable TB rates but no comprehensive DOT programs.

From 1981 to 1992, TB incidence in Baltimore declined

by more than half - from 35 to 17 cases per 100,000 people. In contrast, overall TB rates rose slightly in the other five cities - Miami, San Francisco, Newark, Atlanta and Washington, D.C. From 1986 to 1992, Baltimore patients with TB also had the highest sputum conversion rates (91%) and therapy completion rates (90%) as compared with patients in the other five cities. These trends could not be attributed to AIDS incidence, immigration, poverty or unemployment.

Comment: This epidemiologic study suggests, but does not prove, that directly observed therapy was responsible for the encouraging decline in tuberculosis incidence in Baltimore. - *TH Lee*

Chaulk CP; et al. Eleven years of community-based directly observed therapy for tuberculosis. JAMA 1995 Sep 27; 274: 945-51.

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Local Medical Center Chosen to Participate in Nationwide Study for New Epilepsy Drug in Adults and Children

Baptist Health Medical Center has been selected as one of the almost 100 leading medical centers around the country to participate in studies for the treatment of adults and children with partial seizures or epilepsy.

The treatment features the study of a new medication called vigabatrin, a drug being developed specifically to influence biochemical processes in the brain, aimed at controlling epilepsy.

"We are currently enrolling adults ages 18-65 who suffer from complex partial seizures," said Dr. Victor Biton, the neurologist spearheading the trial at Baptist Health Medical Center. "Adults who qualify for this study will be those who still experience seizures, at least four but not more than 16 seizures over a two-month period, and who are concurrently using one or two antiepilepsy medications."

According to Dr. Biton, children who qualify for the vigabatrin study must fit the study protocol profile. "Children participating in the study must be between the ages of three and sixteen and suffer from complex partial seizures even though they are currently taking one or two epilepsy medications."

Dr. Biton estimates that existing medications allow 60-70 percent of epilepsy patients to maintain full control over their seizures, but 15 percent can achieve only partial control, while another 15 percent get little or no relief, and currently up to 40% of patients controlled on medication continue to experience side effects.

"Physicians abroad have had clinical experience with vigabatrin, since this treatment is available in

many countries outside the U.S. Now it is important that we further evaluate its potential for market approval in this country," said Dr. Biton.

Patients, parents and physicians who are interested in finding out whether a particular patient qualifies to participate in the study should call 1-800-91-HEALTH.

The Hampton Roy Award

Dr. Francisco Contreras of Lima, Peru has been named the first recipient of the Hampton Roy Award presented by the World Eye Foundation. The award was presented during the American Academy of Ophthalmology meeting held earlier this month in Atlanta.

The World Eye Foundation was founded by Dr. Hampton Roy in 1974. In explaining the goals of the organization, Dr. Julio Rojas, Foundation spokesman said, "There are many good organizations that take volunteer teams into developing countries to treat disease and do eye surgery. Our emphasis is on training ophthalmologists in those countries to do a better job of providing eye care themselves on a permanent, continuing basis."

The Hampton Roy Award is presented to the ophthalmologist who has worked most diligently in the past year to achieve the goals of the World Eye Foundation. Dr. Contreras has spent much of his time training eye doctors and paraprofessionals in his home country of Peru. He is also the current president of the Pan American Association of Ophthalmology.

Dr. Roy is in private practice in Little Rock and is Associate Clinical Professor of Ophthalmology at the University of Arkansas for Medical Sciences.

To nominate someone for next year's Hampton Roy Award, send their C.V and description of accomplishments to Dr. Julio Rojas, 1720 E. Broad Street, Hazelton, PA 18201.

MARKET TRENDS - An update on managed care developments

*The New Jersey State Insurance Commissioner has unveiled new HMO regulations that would guarantee consumers an appeal to an independent medical panel if an HMO denies them service, would prohibit a plan from retaliating against a physician who advocates services for patients and would require HMOs to disclose information about their operations, including any financial incentives paid to doctors to limit treatment. The regulations, which are still subject to public comment, are not expected to become final until mid-1996. (Asbury Park Press, November 17, 1995)

*An analysis by Atlanta-based Medirisk, Inc. of physician fees in several markets found examples where managed care organizations have priced physician fees

below Medicare rates. For example, in the District of Columbia, managed care plans pay \$20 for an office visit, 47% less than Medicare's 1995 rate, and in New York, a certain hemodialysis procedure is reimbursed by managed care plans at 88% of the Medicare average. (Modern Healthcare, November 20, 1995)

*HCFA reports that the number of Medicare risk contracts increased from 118 in April 1994 to 179 as of October 1, 1995. Over 60% of Medicare risk contract members are enrolled in plans sponsored by five large corporations including FHP Inc., Humana, Inc., Pacificare Health Systems Inc., Kaiser Foundation Health Plans Inc. and United HealthCare Corp. (BNA's Managed Care Reporter November 2, 1995)

*A Price Waterhouse study for the Group Health Association of America found that for each 10% increase in enrollment in Medicare HMOs, there was a 7.6% drop in Medicare fee-for-service costs. The data was based on Medicare enrollment and expenditures from all U. S. counties between 1988 and 1992. (Hospitals & Hospitals Networks, November 5, 1995)

*A Duke University Medical Center study of over 200,000 Medicare patients diagnosed with heart attacks found that those who received immediate care from cardiologists were 15% less likely to die than those who were treated by primary care physicians. (Wall Street Journal, November 15, 1995)

*Three Dallas-Fort Worth independent physician groups representing 460 physicians have joined to form Physician Partners to aggressively pursue capitated contracts. Physician Partners, which includes a majority of physicians in parts of the market, has a contract to provide services to PacifiCare of Texas's 10,000 member managed care network and is negotiating other contracts. (BNA's Managed Care Reporter, November 1, 1995)

*PhyCor has acquired certain assets of the 44-physician multispecialty South Bend (IN) Clinic and en-

tered into a long-term service agreement. The clinic includes the only freestanding ambulatory surgery center in its market. (Modern Healthcare, November 20, 1995)

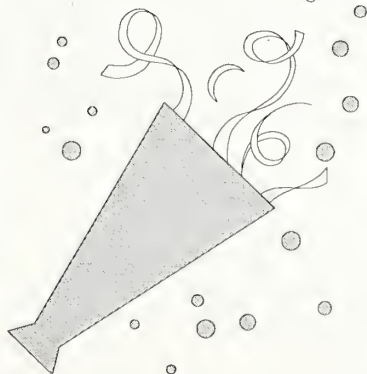
*Duke University Medical Center has formed a 50-50 joint venture company with Sanus Corp. Health Systems. The company will offer an HMO, PPO and point-of-service plan, as well as administrative services for self-insured employee groups. The HMO, WellPath of the Carolinas, is already licensed to operate in 44 North Carolina counties, including the Research Triangle area. Duke, which has a strong relationship with providers and employers in the state, prepared for this move by cutting operating costs, including reducing the workforce by 800. (BNA's Managed Care Reporter, November 8, 1995, Managed Care Outlook, November 17, 1995)

*The American Medical Association's (AMA's) latest physician income survey found that for the first time, median physician incomes declined 3.8%, from \$156,000 in 1993 to \$150,000 in 1994. Median income rose 7.9% in 1992 and 2% in 1993. Observers believe that the increased pressures created by managed care and employer demands for premium concessions could result in further declines in the future. (New York Times, November 17, 1995)

*A survey of 200 Massachusetts physicians — half primary care and half specialists — by the University of New Hampshire Survey Center found that 42% of primary care and 46% of specialist physicians were dissatisfied with managed care and that 41% of primary care physicians and 61% of specialists were concerned that health care decisions were being made by HMO administrators and not physicians. (Boston Herald, November 14, 1995)

Information provided by the AMA-NET, The Private Sector Advocacy and Support Team, American Medical Association, Volume 1, Number 23 - November 27, 1995.

Happy New Year!



Emergency Medicine Opportunities

Full and Part-Time Opportunities in:

- Mena
- Helena
- Van Buren
- West Memphis

WE OFFER: Competitive Remuneration, Occurrence Malpractice & Flexible Hours

For more information on these and other opportunities in Arkansas please contact:

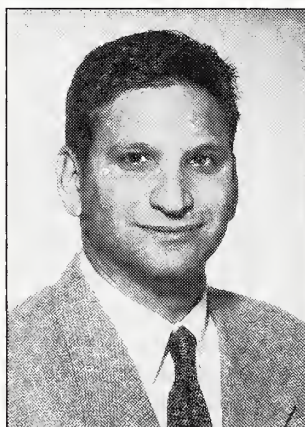
**Tom Kubiak 800-325-2716 or
FAX CV to Tom at 314-919-8920.**

ARKANSAS

INTRODUCING THE ARKANSAS NEUROSURGERY CLINIC



RONALD N. WILLIAMS, M.D.



SCOTT M. SCHLESINGER, M.D.

DRS. RONALD WILLIAMS AND SCOTT SCHLESINGER ARE PLEASED TO ANNOUNCE THE FORMATION OF THE ARKANSAS NEUROSURGERY CLINIC, EFFECTIVE JANUARY 1, 1996. THE PHYSICIANS OF THE ARKANSAS NEUROSURGERY CLINIC OFFER COMPLETE AND COMPREHENSIVE NEUROSURGICAL MANAGEMENT OF BRAIN AND SPINE DISORDERS AS WELL AS MANAGEMENT AND SURGERY OF PERIPHERAL NERVE AND CAROTID ARTERY DISEASE. FOR REFERRALS TO THE ARKANSAS NEUROSURGERY CLINIC AT BOTH BAPTIST MEDICAL CENTER AND ST. VINCENT INFIRMARY MEDICAL CENTER, PLEASE CALL 501-661-0077 DURING OFFICE HOURS. AFTER HOURS OR FOR EMERGENCIES, CALL 501-663-6900.



ARKANSAS NEUROSURGERY CLINIC

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5 St. Vincent Circle • Blandford Physician's Center, Suite 401 • Little Rock, AR 72205-5413
501-661-0077 • Fax 501-664-2749 • Medical Exchange 501-663-6900

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement. Reinstatement is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY:

November 8, 1995

Sara Jo Brown Bostick Wilson, LPN #31118 (Ft. Smith/Wynne) - Suspension - 1 year

Jeffrey S. Hutchinson, LPN #27473 (Ft. Smith) - REVOKED

Patricia Aileen Shannon Selph, RN #37945 (Searcy) - Suspension - 3 years

Donna Michele Banks Scroggins, LPTN #1511 (Little Rock/Ward) - Suspension - 2 years

LETTER OF REPRIMAND:

Laura Mae Chase, LPN #33645 (Little Rock) - October 17, 1995

OFF PROBATION:

William Alan Jennings, RN #37157 (Sherwood) - November 9, 1995

VOLUNTARY SURRENDER:

David Lee Flowers, RN #45148 (Memphis, TN) - October 31, 1995

Nancy Susan Isch, RN #44280 (Conway) - October 30, 1995

Joe Burley Rambo, II, LPN #31411 (Monticello/Wilmar) - November 8, 1995

REINSTATEMENT:

Teresa Olivia Hawkins, LPN #25649 (Huntsville) - November 9, 1995

Rita Kay Madden "Young" Joyner, RN #34753 (Texarkana, TX) - November 9, 1995

Evelyn Renee Pipes, RN #42250/LPN #23172 (South Haven, MS) - November 9, 1995

In Memoriam

H. Thurston Black, M.D.

Dr. H. Thurston Black, of Little Rock, died Sunday, November 26, 1995. He was 72. He is survived by his wife of 51 years, Mary Olive Black, and one brother, Dr. Charles I. Black of Baton Rouge, Louisiana.



Debra Lynn Velez Owings M.D.

Dr. Debra Lynn Velez Owings, of Little Rock, died Sunday, November 19, 1995. She is survived by her husband Richard Alan Owings, M.D., Ph.D., of Little Rock; two sons Richard Alan Owings, Jr., Alexander Phillip Owings, one daughter Rachel Amanda Owings, all of Little Rock; and a dear friend Stephanie O'Brien; her father and mother Miguel and Margaret Covert Velez of Little Rock; two brothers Duane Velez, M.D., and his wife Debra Studyvin Velez and their children Jennifer, Elizabeth and Meredith of Little Rock, and Michael W. Velez of Little Rock.

Things To Come

February 7-10

1996 International Conference on Physician Health "Uncertain Times: Preventing Illness, Promoting Wellness." Sheraton San Marcos Hotel in Chandler, Arizona. Sponsored by the American Medical Association, Canadian Medical Association, Federation of State Licensing Boards, and the Federation of Provincial Licensing Boards. For more information, call (312) 464-5066.

February 9 - 10 (Mardi Gras Season)

Neuropsychiatric Aspects of Primary Care: Anxiety and Depression - Across the Life Cycle. Royal Sonesta Hotel, New Orleans, Louisiana. Sponsored by Tulane University Medical Center, Office of Continuing Medical Education. For more information, call (504) 588-5466 or 1-800-588-5300.

February 10-13

Fifty-first Annual Postgraduate OB/GYN Assembly. Beverly Hilton Hotel, Beverly Hills, California. Sponsored by the OB/GYN Assembly of Southern California. For more information, call (213) 937-5514.

February 11 - 16

Emergency Medicine: 1996 19th Annual UCD Winter Conference. Hyatt Regency, Incline Village, Nevada. Sponsored by the Office of Continuing Education and UC Davis School of Medicine and Medical Center. For more information, call (916) 734-5390.

February 17-19

Mardi Gras Anesthesia Update in New Orleans. Westin Canal Place Hotel, New Orleans, Louisiana. Sponsored by the Department of Anesthesiology & Office of Continuing Education, Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

February 19 - 23

"New Technological Applications in Imaging & Intervention." Manor Vail Lodge, Vail, Colorado. Sponsored by the Departments of Radiology at Louisiana State University School of Medicine and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

March 18 - 22

PET and SPECT Imaging in Cancer Diagnosis and Treatment. Ihilani Resort and Spa, Kapolei, Hawaii. Sponsored by the Johns Hopkins University School of Medicine. For more information, call (410) 955-2959 or (410) 955-8582.

March 27 - 30

6th Annual Challenges in the Clinical Practice of EMERGENCY MEDICINE. Presidente Inter-Continental Resort, Cozumel, Mexico. Sponsored by Symposia Medicus. For more information, call (510) 935-7889 or (800) 327-3161.

April 26 - May 3

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

May 3 - 4

Current Topics in Pathology VI: Dermopathology A Jazz Festival Conference. Hyatt Regency, New Orleans, Louisiana. Sponsored by Tulane University Medical Center Department of Pathology and Laboratory Medicine and the Office of Continuing Education. For more information, call (504) 588-5466 or 1-800-588-5300.

May 13 - 24

7th Annual Tropical Health Update. Tulane University School of Public Health & Tropical Medicine, New Orleans, Louisiana. Sponsored by the Office of Continuing Education and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

June 6 - 9

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

January 25, 1996

Cardio Renal Considerations in Hypertension

Sponsored by UAMS AHEC - South Arkansas

Location: MCSA Union Campus Conf. Room #3

12:30 p.m. - 1:30 p.m.

No fee - Lunch served

1 Category I credit hour offered

February 8, 1996

Minimizing Medication To Maximize Result

Sponsored by UAMS AHEC - South Arkansas

Location: MCSA Union Campus Conf. Room #3

12:30 p.m. - 1:30 p.m.

No fee - Lunch served

1 Category I credit hour offered

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium

Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457

Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom

Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom

Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom

Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.

Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.

Urology Grand Rounds, 1st Tuesday, 5:30 p.m., Southwestern Bell/Arkla room. Refreshments provided

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1

Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library

Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.

Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.

Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building

Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.

Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits

Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B

Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock

Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114

CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy

Cardiothoracic Surgery Conference, date, time, & location varies

Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D

Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room

CME Outreach Program, dates, times & locations vary

EKG Conference, Mondays, noon, VAMC, room 5C114

Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B

Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B

Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room

Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm

Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29

GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room

Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room

Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306

LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC

Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B

Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306

Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room

Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135

Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC

Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC

Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33

Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C

Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours

Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141

OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.

OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B

Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours

Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute

Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135

Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours

Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135

Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135

Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue

Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium

Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Gastroenterology Conference, 3rd Tuesday every other month, 7:00 a.m., St. Edward Mercy Medical Center

Grand Rounds, 12:00 noon, first Thursday of each month, Sparks Regional Medical Center
Neuroradiology Conference, 3rd Wednesday, 12:00 noon, St. Edward Mercy Medical Center
Neuroradiology Conference, 1st Tuesday, 11:30 a.m., Sparks Regional Medical Center
Sparks Tumor Conference, Thursdays, 12:00 noon, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 32 Number 2

February 1996

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**Bald eagles back at DeGray
and apparently healthy**
page 467

**Instructions for Reporting
Communicable Diseases to the ADH**
removable for future reference
page 456

**New Medicare Correct
Coding Combinations**
page 439

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 9

February 1996

CONTENTS

FEATURES

- 436 **Double Stamps on Wednesday**
Editorial
Alex E. Finkbeiner, M.D.
- 439 **Medicine in the News**
Health Care Access Foundation Update
New Medicare Correct Coding Combinations
Studies Show Income Shrinking for Some Physicians
Market Trends - An update on managed care developments
Healthcare Tid-Bits
The First Half-Million AIDS Cases
- 445 **New Member Profile**
Stephen M. Sokolyk, M.D.
- 447 **The Relationship of Episiotomy to Third and Fourth Degree Lacerations**
Special Article
William E. Golden, M.D.
Nena Sanchez, M.S.
- 449 **Headache - An Important Symptom**
Loss Prevention Case
J. Kelley Avery, M.D.
- 456 **Instructions for Reporting Communicable Diseases to the ADH**

Editor's Note: This issue of *The Journal* brings a bit of change. Due to growth and popularity, *The Medicine in the News*, *AMS Newsmakers* and *New Member Profile* sections will from now on be located closer to the front of *The Journal*. If you have any news relevant to these sections, be sure to mail it and a photo to the Editor at the Arkansas Medical Society, P.O. Box 5776, Little Rock, AR., 72215-5776.

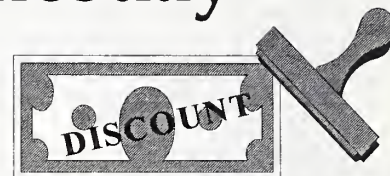
DEPARTMENTS

- 443 **AMS Newsmakers**
- 453 **Cardiology Commentary & Update**
- 455 **State Health Watch**
- 460 **Arkansas HIV/AIDS Report**
- 463 **New Members**
- 467 **Outdoor MD**
- 469 **Radiological Case of the Month**
- 472 **In Memoriam**
- 473 **Things to Come**
- 475 **Keeping Up**

Cover photo taken by A. C. Haralson, Arkansas Department of Parks and Tourism.

Double Stamps on Wednesday

Alex E. Finkbeiner, M.D.*



In the 1950's, Mother always shopped for groceries at McNitt's IGA on Wednesdays. Although other grocery stores were closer and carried the same merchandise, McNitt's offered S & H green stamps and Wednesday was double green stamp day. For those too young to remember, one received green stamps at the checkout counter proportional to the amount of purchase. One would affix these stamps to booklets which could be redeemed for various catalog merchandise.

Those childhood memories of pasting stamps in booklets and the anticipation of filling one more booklet to send away for one or more of the dazzling array of gifts displayed in the catalog were recently rekindled by a brochure I received in the mail. This brochure was sent by a local surgery center and contained coupons called "surgery bucks." The enclosed information indicated that patients could redeem the coupon for \$25 if they utilized the surgery center's services.

Now that \$25 coupons have been introduced into local medical marketing I can envision other health care providers countering with their own "green stamp" promotions.

■ *The frequent flier plan:* After three diagnostic or surgical procedures one is entitled to a fourth procedure free.

■ *The Midas Muffler guarantee:* If one has a recurrence of the problem for which the original procedure was performed, the procedure will be repeated without charge as long as you own your body.* (*certain restrictions may apply.)

* Dr. Finkbeiner is Professor of Urology at the University of Arkansas for Medical Sciences, Department of Urology, and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

■ *The family plan:* Discounts available if every family member undergoes the same procedure the same day; incidental appendectomies come to mind.

■ *The organization plan:* Group discounts for surgery for members of an organization. Ten percent of the usual surgical fee could be returned to the organization; an attractive fund-raising device for churches or fraternal organizations.

■ *Double procedures on Wednesdays:* If you have one surgical procedure on Wednesday, another procedure of your choice will be performed free.

■ *The referral plan:* Who could resist recruiting and paying a finder's fee to cosmetologists to refer hysterectomies for clients who still have a uterus?

Yes, medicine is a business and other businesses have taught us that marketing improves the bottom line. Marketing is concerned with moving goods, services and/or ideas from the producer to the customers. Marketing students are taught the four P's of marketing: Place (proximity), price, promotion and product. Particularly in larger cities, multiple health care systems are competing just as McNitt's competed with other local grocery stores and it is inevitable that the four P's have been introduced into medical marketing.

Historically patients sought medical care close to their familiar surroundings, but they are now more willing and able to travel greater distances thereby opening the door for a greater geographical range of marketing. One surgical center in the state markets the services of its van providing the ultimate door-to-door service. What's next? A mobile MASH unit that brings surgical services right to your front door?

Price has always been an attractive promotion. The founder of a large retail chain was quoted as telling his management, "It's not as important that we sell for

less as it is that people think we sell for less." Reflecting back on Wednesday grocery shopping, I am sure McNitt's did not provide a wider variety or better quality of groceries than the other stores in town. Were their groceries cheaper? I doubt it although we thought so because we could redeem the stamps for other merchandise. In fact, we probably paid more for the groceries to cover the cost of the green stamps and the promotion.

Promotion or advertising has been defined as "the art of convincing people to buy things they don't need." Double stamps on Wednesday and now "surgery bucks" are promotions in the truest sense. Generally, patients have a blind faith in health care deliverers; we order diagnostic tests or perform procedures because patients "need these tests and procedures done." How often do we practitioners stop and ask ourselves whether or not the patient truly needs these expensive tests or procedures? How often do we order tests or perform procedures because they generate income?

If we must market medicine, why don't we promote the fourth P; the product or quality of medicine? Who among us has the courage and willingness to

market our outcomes rather than our come-ons? How refreshingly honest for someone to objectively and without bias define parameters of quality care, collect their data and then market such outcomes as patient satisfaction (testimonials are neither objective nor without bias), complications, recurrence rates, etc.; the true parameters by which we should be judged; the outcomes patients truly seek. I understand some managed care programs are currently tracking outcomes. I suspect, however, this is being done not for altruistic reasons but for more pragmatic ("bottom line") reasons.

The profession of medicine and medical practitioners has a long, noble history of compassionate care and a dedication to minister to the sick. Have we lost our backbone and sense of history, and are we now going to follow the allure of marketing and dollar signs and fall into a delivery system of fast foods, quick fixes, discount medicine and Madison Avenue hype?

In reference to managed care salespeople, Dr. Winston Griner, a doctor in private practice in Nashville who treats large numbers of poor people, recently said, "This is the sale of health care; it is no longer the provision of health care." ■

Family Medicine Faculty, Assistant or Associate Professor. Community-based, twenty-seven resident program with university affiliation. Seven full-time physician faculty members with plans to expand to nine. Responsibilities include teaching and supervision of residents and medical students, three to four half days of patient care per week, and research if desired. Obstetrical skills essential. Fayetteville is the location of the main campus of the University of Arkansas and is situated in the beautiful Ozark Mountains. School system and economy are considered the strongest in the state. Salary very competitive.

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Medicine in the News

Health Care Access Foundation

As of January 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 10,323 medically indigent persons, received 19,045 applications and enrolled 37,873 persons. This program has 1,722 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

New Medicare Correct Coding Combinations

(Effective for claims received on or after January 1, 1996)

In August of 1995, the Health Care Financing Administration (HCFA) awarded a contract to AdminaStar Federal to define correct coding practices that would be the basis of national Medicare policy for payment of claims using the AMA Physicians' Current Procedural Terminology (CPT-4) system.

AdminaStar Federal developed correct coding combinations based upon review of CPT code descriptors, CPT coding instructions, existing local and national coding edits, and Medicare billing history. AdminaStar Federal developed a comprehensive narrative policy (the correct coding policy) which outlines general and specific guidelines for the appropriate use of CPT coding for physician claims.

AdminaStar Federal distributed the narrative policy, containing 94,000 coding combinations, in December 1994 to physician specialty societies through the AMA and to other national specialty societies that represent physicians and non-physicians who may be impacted by this policy. The draft policy was also shared with the Medicare Carrier Medical Directors.

After reviewing and incorporating the comments, and receiving HCFA's approval, AdminaStar Federal developed a "code matrix" - correct coding combinations - and sent it directly to the standard system maintainers to be incorporated into the Medicare carriers' claims processing systems. This matrix, based on the correct coding policy, will automatically identify inappropriate CPT code combinations and will properly determine payment. Existing national Medicare payment policies are not changed by the correct coding policy.

Two main types of code combinations were implemented in January 1996. One is the comprehensive and component code combinations and the other is the "mutually exclusive" coding combinations which represent services or procedures which would not or could not be performed at the same time based on the CPT code description or standard medical practice.

The coding edits have been implemented (effective

with dates of service of January 1, 1996), despite a demonstration of solidarity by more than 50 national medical specialty societies signing a letter urging the HCFA to establish a six-month grace period before implementing the AdminaStar coding edits. HCFA was also not persuaded by a letter signed by more than half of the carrier advisory committee co-chairs, including Dr. Ronald Hughes of Arkansas. The letter suggested that more time be provided before implementing the "Correct Coding Initiative."

HCFA's decision to move forward with the AdminaStar project was due to strong pressure from members of Congress to adopt more restrictive coding practices. Last year, Congress held hearings on a GAO study that criticized HCFA for not adopting coding rules used in the private sector.

The AMA and a number of national medical specialty societies have been suggesting to HCFA since the spring of 1995 that the proposed coding edits were filled with errors and needed to be revised. Some coding edits included Medicare policy changes and should not have been included in the November 1995 list of edits released by the National Technical Information Services (NTIS). The AMA again wrote HCFA in early October 1995 expressing reservations about the technical process being used to develop the coding edits.

HCFA has agreed to expeditiously fix or remove those code edits identified to them where there may be conflict. HCFA is promising a decision on any comments made within two weeks of their receipt by AdminaStar. HCFA has requested that specialty societies or individuals who have questions regarding particular edits be as specific as possible when querying AdminaStar. **AdminaStar's address for these concerns is: The Correct Coding Initiative, AdminaStar Federal, P.O. Box 50469, Indianapolis, IN 48250-0469. AdminaStar may also be faxed at 317-841-4691.**

If a claim fails to meet the new coding edits it will either be denied or downcoded. If that particular edit is subsequently found to be in error (i.e., as a result of a specialty society request for further clarification, etc.) the claim will automatically be reprocessed. On the other hand, claims denied by Medicare on the basis of the new coding edits will be subjected to limiting charge rules which state that Medicare does not make separate payment for procedures that are part of a more comprehensive group of services.

In cases where distinct procedural services are performed on the same day, physicians may need to use the HCPCS modifier "GB." This may represent a different session or patient encounter, different procedure or surgery, different site, separate lesion, or separate

injury (or area of injury in extensive injuries).

In those instances, application of the "GB" modifier will prevent erroneous denials of claims for several procedures performed on different anatomical sites, on different sides of the body or at different sessions on the same date of service. The medical record must reflect that the modifier is being used appropriately to describe separate services.

Impact on Arkansas

An analysis of a small sample of claims was performed to estimate the potential impact of the correct coding edits on Arkansas providers for 1996, the first year of the program. It was found that all specialties will be affected. However, it was noted that the following specialties will be the ones impacted most: Anesthesiology - \$571,000; Orthopedic Surgery - \$1.41 million; Urology - \$306,000; and Independent Practicing Physical Therapist - \$500,000.

Summary of Correct Coding Policy

CPT Procedure Coding Definition: The CPT procedure code definition, or descriptor, is based upon the procedure being consistent with current medical practice. In order to submit a CPT code to Medicare, the provider must have performed all of the services included in the code descriptor. Otherwise, the provider must submit a less comprehensive code. Providers must not submit codes describing components of a comprehensive code in addition to the comprehensive code. Components are services necessary to accomplish the more comprehensive procedure/service. In the rare instances where the national Medicare policy differs from instructive language in the CPT descriptor, providers should follow the national Medicare policy.

Mutually Exclusive Code Pairs: These codes represent services or procedures that, based on either the CPT definition or standard medical practice, would not or could not reasonably be performed at the same session by the same provider on the same patient. Codes representing these services or procedures cannot be submitted together.

Separate Procedures: Although certain CPT codes are identified as "separate procedures," HCFA has determined that these codes may be occasionally provided as part of a more comprehensive procedure and at those times these codes with a designation of "separate procedure" should be submitted with their related and more comprehensive codes.

Most Extensive Procedures: When CPT descriptors designate several procedures of increasing complexity, only the code describing the most extensive procedure actually performed should be submitted.

"With"/"Without" Services: Certain CPT descriptors designate procedures performed "with" or "without" other services. Submit only the code describing the service actually performed.

Sex Designation: Certain CPT code descriptors identify procedures requiring a designation for male or female. Submit only the appropriate one of these designations for an individual patient.

Standards of Medical Practice: Medicare considers all of the services necessary to accomplish a given procedure to be included in the description of that procedure as defined by CPT. Ancillary services necessary to accomplish the procedure are considered included, although independent CPT codes may exist for these ancillary services. Medicare considers billing these independent CPT codes unbundling, which is prohibited.

Anesthesia Performed During Medical/Surgical Procedures: The Medicare Physician's Fee Schedule precludes payment of a separate fee for anesthesia when provided by the same physician performing the medical/surgical procedure. Therefore, do not submit CPT codes describing anesthesia services or services necessary to provide anesthesia with primary procedure/services codes.

Laboratory Panels: When CPT describes laboratory services performed as a "panel" or grouping, submit the appropriate code describing the panel or grouping. Do not submit codes for individual laboratory tests when a code for a grouping or "panel" exists for the services performed.

Sequential Procedures: There are several different instances addressed regarding sequential procedures:

For those patient encounters where the provider finds it necessary to attempt several procedures in direct succession to accomplish the same end, submit only the procedure that is successfully accomplished. This policy generally applies to limited procedures that are unsuccessful, mandating a more comprehensive procedure.

Procedures performed at the same session that are diagnostic in nature and establish the decision to perform the more comprehensive service may be separately submitted.

To receive information on paper and electronic ordering options for the correct coding combinations, call the National Technical Information Service. To receive the information by fax, call 703-487-4140 and enter code 8657. To receive the information by mail, call 703-487-4650 and ask for PR-1030.

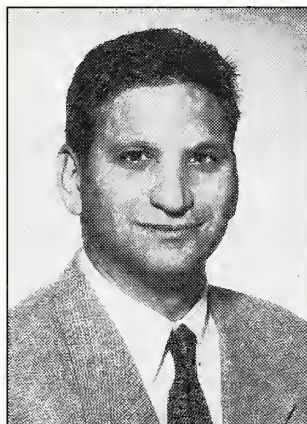
Information compiled from Medicare Providers' News newsletter, dated November 10, 1995 and the AMA FED-NET, January 1, 1996.

See more Medicine in the News on page 442

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SCOTT M. SCHLESINGER, M.D.

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Studies Show Income Shrinking For Some Physicians

Two new studies confirm what many physicians have been saying for the past two years. *Income for some physicians is slipping.* A study released by the accounting firm Ernst & Young reports that primary care physicians in practices with more than 50% of gross revenues from managed care will earn a median income of \$124,300 in 1995, as compared with earnings of \$137,900 in 1994. In practices with less than 50% of gross revenues from managed care, the median for primary care physicians will jump to \$120,000 as compared to \$108,000 in 1994.

According to Ernst & Young, specialists - including FP, IM, Ped and Ob/Gyn - did better overall. Although 1995 income for specialists in managed care practices stayed even with 1994 income at \$147,000, the average income of non-managed care specialists rose dramatically from \$132,000 in 1994 to \$162,000 in 1995.

Surgical specialists top the chart for managed care practitioners with median annual earnings of \$174,900. The figures do not reflect benefits or retirement funding.

According to Ernst & Young, the average earnings of primary care physicians in HMOs was \$128,100. However, high performers could earn up to \$200,000 in base salary and incentive/bonus pay.

The AMA's Physician Marketplace Statistics survey shows overall physician pay decreasing by 4% in the past year with mean income of all working physicians (not including residents) dropping from \$189,000 in 1993 to \$182,000 in 1994.

Information provided by the Medical Society of the State of New York.

Market Trends - An update on managed care developments

A California jury awarded \$3 million to the family of an HMO patient who died of colon cancer after her primary care physicians refused to refer her to a specialist for her symptoms. She received a referral only after her husband accompanied her to the office and refused to leave until a referral was made. By that time, the tumor had advanced and her chances of survival dramatically decreased. Although the jury awarded damages against the HMO, the judge threw out a cause of action against the physicians for breach of fiduciary duty to the patient. (BNA's Health Law Reporter, November 30, 1995)

An Oregon HMO has settled for \$1 million with a patient who alleged that she was denied timely surgeon. The plaintiff's neurosurgeon, a member of Providence Good Health Plan of Oregon, Inc.'s provider network, recommended surgery for a compressed

nerve root on her hand. The HMO denied surgery and recommended physical therapy. The plaintiff's primary care physician appealed the denial. Seven months after the initial request, the HMO approved the surgery. However, too much nerve damage had occurred in the meantime and the damage could not be corrected by surgery. (BNA's Managed Care Reporter, December 13, 1995)

A New York mother has sued Aetna Health Plans of New York, alleging that by adopting a capitated payment arrangement for physician services, Aetna has violated ERISA. The plaintiff's two children suffer from a chronic disease, and their physician allegedly is being forced to leave the plan because the capitation rate is not enough to cover his costs. The lawsuit contends that Aetna has violated its fiduciary duty under ERISA to act "solely in the interest of the participants and beneficiaries" by adopting a payment mechanism that serves the interest of Aetna and not the beneficiaries. (New York Times, December 20, 1995)

Information provided by the AMA FED-NET, January 8, 1996.

Healthcare Tid-Bits

-Elderly patients may mistakenly be treated for Parkinson's disease when they take a common drug (Reglan) used for digestive disorders and for prevention of nausea, reports a new study published in the December 12, 1995 issue of JAMA. The report was covered by newspapers from around the country.

-Researchers say they have demonstrated for the first time the ability to immunize rats against some of the stimulant effects of cocaine, opening up a potential new treatment for drug addiction.

-TPA, used for years to halt heart attacks, is now shown to be useful for many stroke victims allowing them to recover with little or no brain damage, according to a five-year study of 624 stroke victims.

Information provided by the AMA, FED-NET, Health Care News Today, December 14, 1995.

The First Half-Million AIDS Cases

October 1995 saw a milestone of sorts as the total number of AIDS cases reported to the CDC since 1981 reached the half-million mark. Nearly half of these cases have been reported since 1993 and 62% have died.

The proportion of AIDS cases among females increased from 8% during the period from 1981 to 1987 to 18% from 1993 to 1995. Between the same periods, the proportion among whites has decreased from 60% to 43%, while that among blacks has increased from 25% to 38%, and that among Hispanics from 14% to 18%. As of 1994, the rate of AIDS cases per 100,000 population was 101 for blacks, 51 for Hispanics and 17 for whites.

The pattern of HIV transmission has also changed. Injection-drug use, reported in 17% of AIDS cases between 1981 and 1987, increased to 27% from 1993 to 1995. The proportion of cases attributed to heterosexual transmission rose from 3% to 10% between the two periods, while cases among homosexual men fell from 64% to 45%.

Comment: According to the World Health Organization, 18 million adults and 1.5 million children are

infected with HIV, and AIDS cases worldwide number 4.5 million. As the risks and modes of transmission vary with the community involved, effective prevention must include director community involvement. - *DM Berwick*

First 500,000 AIDS cases - United States, 1995. MMWR 1995 Nov 24; 44:849-53.

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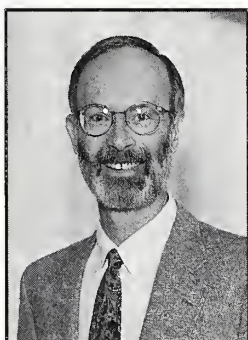
AMS Newsmakers

Dr. James Witt Bryan IV, of North Little Rock, recently attended the 47th annual Scientific Assembly of the American Academy of Family Physicians in Anaheim, California. Topics included, among others, managed health care, preventing dysfunction in family relationships, team approaches to detecting breast cancer and communicating with teenagers.

Dr. Shannon Card, of Berryville, delivered his 750th baby on October 24, 1995.

Dr. Randall E. Cole, an ophthalmologist in Rogers, recently attended a refractive laser seminar in Windsor, Canada. The Excimer Laser Symposium was a complete course on laser vision correction of refractive errors including nearsightedness, astigmatism and farsightedness. The course included observation of live surgery, examination of postoperative patients and a hands-on workshop.

Dr. John Richard Duke, a UAMS resident, was recognized recently by the AMA for his contributions to community service. He was one of 40 honorees of the AMA/Glaxo Wellcome Inc. Leadership Award Program for resident physicians. Dr. Duke will have the opportunity to attend the Annual Meeting in Chicago, Illinois, in June of this year.



John Richard Duke, M.D.

Dr. Thomas E. Knox, an orthopaedic surgeon in Mountain Home, recently attended the 1995 North American Hip and Knee Symposium focusing on managing patients with hip and knee arthritis.

Dr. Donald Miller, of Pine Bluff, recently received the Robert Shields Abernathy Award for excellence in internal medicine from the American College of Physicians. The award is given annually to an internist who has trained, practiced or taught in Arkansas and achieved distinction in the profession.

Dr. John Moose, a family practitioner in Siloam Springs, recently retired after 29 years of service.

Dr. Howard Morris, of Texarkana, has been named Executive of the Year by Professional Secretaries International's Twice As Nice Chapter in Texarkana. The organization honors executives or bosses annually.

Dr. Robert White recently attended the 1995 scientific meeting of the Arkansas Chapter of the American College of Physicians. Topics included updates on recent advances in diagnosis and treatment of problems including hypertension, heart disease, diabetes and HIV infection.

Physician's Recognition Award

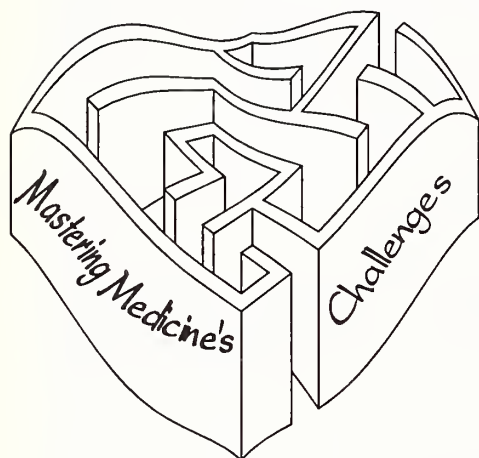
The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of November & December 1995 are:

James R. Adametz	Little Rock
Jacob Amir	Little Rock
Maurice K. Borklund	Booneville
Joe Lee Buford	North Little Rock
Richard Lister Calleton	Mena
Joe Henry Dorzab	Fort Smith
Kenneth M. Kilgore	Mountain Home
Diane G. Lepore	Jonesboro
James Ralph McCoy	Searcy
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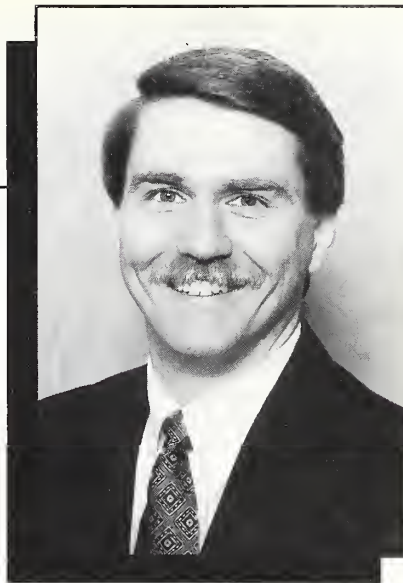
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New Member Profile



Stephen M. Sokolyk, M.D.

PROFESSIONAL INFORMATION

Specialty: Cardiology

Years in Practice: Less than one year

Office: El Dorado

Medical School: University of Texas Southwestern Medical School
in Dallas, 1988

Internship/Residency: Hennepin County Medical Center, Minneapolis, Minnesota, 1991

Honors/Awards: Summa Cum Laude and Phi Beta Kappa at Rice University, and Alpha Omega Alpha at University of Texas Southwestern Medical School

PERSONAL INFORMATION

Wife: Beth

Children: Katie, four years old; Alex, two years old and one on the way!

Date/Place of Birth: November 16, 1963 - San Antonio, Texas

Volunteer Work: Sunday School Teacher

Hobbies: Golf, bridge and foreign languages

Miscellaneous: Belonged to Ukrainian folk dance groups for 13 years

THOUGHTS

If I had a different job, I'd be: A professor of German

Historical figure I most identify with: Roman Emperor Claudius

Worst Habit: Biting the inside of my cheeks

Best Habit: Spending a long time talking to patients

Favorite junk food: Pizza

Most valued material possessions: Books

People who knew me in medical school, thought I was: Smart, but a geek

The turning point of my life was when: I met my wife

Favorite vacation spot: Hawaii

One goal I haven't yet achieved: Winning a lottery

One goal I am proud to have reached: Becoming a cardiologist

Favorite childhood memory: Christmas programs at my Lutheran elementary school

When I was a child, I wanted to grow up to be: A physician, always

One of my pet peeves: Patients who answer "a while" to the question "How long?"

First job: Internal medicine resident

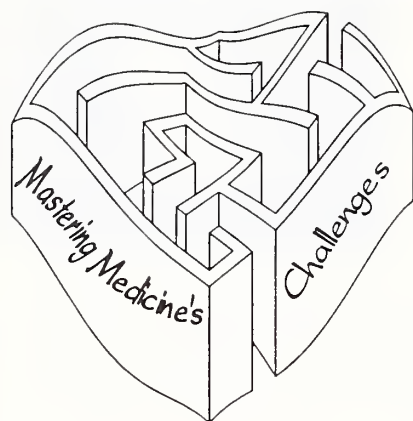
Worst job: Cardiology fellow

One word to sum me up: Intense

My life philosophy: Do it well or not at all

If you are interested in appearing in either the *New Member Profile* or *Member Profile*, contact Tina Wade at the Arkansas Medical Society at (501) 224-8967 or 1-800-542-1058.

6 Reasons



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- 3** The 1996 Annual Session provides an opportunity for old and new friends to relax and meet with their peers to exchange ideas.
- 4** Participation in the AMS House of Delegates meeting gives county medical societies a voice in the policies of the state association.
- 5** A young physician workshop addresses coding and reimbursement, practice management, or other topics that face AMS members who are joining or starting a practice.
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The Relationship of Episiotomy to Third and Fourth Degree Lacerations

William E. Golden, M.D.*

Nena Sanchez, M.S.**

Over the last three years, the Arkansas Foundation for Medical Care (AFMC) has evolved into a regional quality improvement organization developing statewide projects based on clinical research and practice guidelines with focused indicators and suggestions for assessment of health care processes. The majority of this experience has been with the Health Care Quality Improvement Program of the Health Care Financing Administration and the Medicare Program. During 1995, we entered into similar arrangement with the Arkansas Department of Human Services and are designing projects for the Medicaid Program in our state. While we are developing assessments of outpatient claims for the Arkansas Medicaid Managed Care Program, we are also designing quality improvement initiatives for inpatient care. Early efforts have focused on obstetrical issues because of the large number of deliveries reimbursed by Medicaid. This report focuses on soft tissue injuries secondary to episiotomy and the potential to reduce the morbidity from extensive tears associated with this intervention.

Soft tissue injuries during childbirth are common and potentially morbid events. Review of Arkansas Medicaid data indicates that third and fourth degree lacerations during childbirth are as common as 10% of deliveries in some hospitals. Table 1 shows a statistically significant trend in that patient age increases as the percentage of lacerations decrease. Chronic complications of these injuries can include anorectal abscess, rectovaginal fistula, fecal incontinence, dyspareunia and can result in the need for operative surgical repair. This report examines the potential to reduce the incidence of these lacerations.

An emerging literature has examined the incidence and etiology of pelvic tears during childbirth. The use of midline episiotomy is a major risk factor for these

third and fourth degree tears.¹⁻⁷ A collaborative perinatal project demonstrated that routine midline episiotomy increased the risk of third and fourth degree perineal laceration four-fold among nulliparous women, and over twelve-fold among multiparous women.⁸ Use of episiotomy has declined in importance during the last decade, subsequent to a major literature review in 1983 that questioned the documented benefits of the procedure.⁹ Nevertheless, many practitioners still use this technique frequently in delivering infants. In 1987, episiotomy was performed in 62% of vaginal deliveries in the United States (80% of nulliparous patients

Table 1
Medicaid in-patient discharges 1994
Third & fourth degree lacerations
during vaginal delivery

	Deliveries	Lacerations	%
Patient's age:			
<=17	1782	81	4.55
18-29	10903	334	3.06
>=30	1379	21	1.52
			P<0.001 (TREND)
Hospital Bed Size:			
<100	2070	57	2.75
>=100	11994	379	3.16
			(P=.325)

and 20% of multiparous patients).¹⁰ It appears that while spontaneous delivery increases the risk of anterior perineal tears, midline episiotomy is associated with deep posterior lacerations. Mediolateral episiotomies have fewer third and fourth degree lacerations but are associated with greater blood loss.

Efforts are underway in many areas to reduce the use of episiotomy, partly to reduce the incidence of secondary tears associated with delivery. It appears

* William E. Golden, M.D., is Principal Clinical Coordinator of the Arkansas Foundation for Medical Care, Inc., Associate Professor of Medicine at UAMS and President of the American Society of Internal Medicine.

** Nena Sanchez, M.S., is Senior Statistician at the Arkansas Foundation for Medical Care, Inc.

that a quality improvement project directed at this aspect of intrapartum care could have a significant effect on reducing anal sphincter morbidity.¹¹ One study showed a 1.8% incidence of third and fourth degree lacerations in selective episiotomy patients, versus 16% in patients receiving a more liberal episiotomy approach to delivery.¹² Techniques to avoid episiotomy include gentle counter pressure, the use of sterile lubricant, and maneuvers to keep the fetal head flexed.¹³

The percentage of deliveries involving third and fourth degree lacerations could be a useful quality indicator of obstetrical care. The Arkansas Foundation for Medical Care recommends using this clinical event for internal review of obstetrical care to ascertain whether there is need for additional attention to obstetrical outcomes.

Summary

Third and fourth degree lacerations can produce significant long term morbidity to women undergoing childbirth. The incidence of third and fourth degree lacerations is variable depending on the institution and the obstetrical provider. While episiotomy remains a valuable intervention in selected cases, an improvement program directed at lowering the use of episiotomy can reduce the incidence of this clinical event. Hospitals and physicians with higher rates of third and fourth degree tears should examine the use of episiotomy, and midline episiotomy in particular, which is associated with an increased incidence of third and fourth degree tears.

Suggestions

Hospitals should adopt as a clinical quality indicator the rate of third or fourth degree tears during delivery. Hospitals with higher rates of such tears (greater than 2%) should examine their rate of episiotomy, particularly midline episiotomy.

The Arkansas Foundation for Medical Care will be happy to answer any questions concerning this report

and offer assistance to institutions interested in implementing a quality improvement project. For further information, contact AFMC's quality improvement coordinator at (501) 785-2471, extension 204.

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Headache - An Important Symptom

J. Kelley Avery, M.D.*

Case Report

The patient was a 25-year-old man who would not have aroused the interest or concern of many physicians on the first visit. He reported to the board certified family physician of the HMO to which he belonged with a five-day history of a pounding occipital headache. He gave no history of trauma, but had a history of excessive beer drinking, the regular use of marijuana, and the occasional use of cocaine. He reported no previous headaches. Examination revealed no significant abnormalities. His blood pressure was recorded as 140/88 mm Hg. A cursory neurologic examination was within normal limits, and there was no tenderness over the occipital region. He was treated symptomatically with a mild tranquilizer and aspirin, and instructed to return to the clinic if he was unimproved in "several days."

One week after the first encounter he was seen again by the same physician with the same symptoms. The headache was still described as "pounding," and located principally in the occipital region. Again the examination was considered normal. The patient stated that he was sleeping a little better. His blood pressure was unchanged. This time the diagnosis entered on the examination form was "headache of undetermined origin." A synthetic codeine preparation was prescribed. The record indicated that the physician planned a CT of the head and a neurologic consultation of the symptoms were not improved in a few days. Laboratory work, including a CBC and urinalysis, was reported as normal.

Five weeks after the initial visit, the patient was seen again with the same complaints of persistent, unrelenting headache. He reported only slight relief from the medication that had been prescribed. This time, the examiner reported some worsening of the pain on movement of the head, and thought there was a "prominence" on palpation of the occipital area. X-rays of the cervical spine were reported to show some

"straightening," which was thought to be due to muscle spasm. An order was written to refer to a neurologist.

The patient was examined by the neurologist the following day. The specialist reported that there was no evidence of "root or cord disease." He prescribed an NSAID and requested that the HMO arrange for physical therapy. He was examined by another HMO physician, a board certified internist who prescribed a muscle relaxant and ordered physical therapy. It was not until four days later that the physical therapy treatments began. The physical therapist reported to the HMO internist that the patient "looses his balance easily, complains of dizziness, and still has constant pain." Ten days later the patient reported to the emergency room (ER), but was told by the HMO's precertification nurse that he could not be certified as an emergency patient and was to see the original physician who first examined him at the HMO clinic. The ER physician did record "normal neuro" and felt that the difficulty was "musculoskeletal pain, anxiety, and depression," for which he prescribed a mild antidepressant. The following day the young man was examined by his original doctor who reported, "Still having excruciating headache and doesn't want to go to work." A stronger narcotic was prescribed, along with an antihistamine decongestant, since the family physician's examination suggested some middle ear effusion. The record of this encounter ended with the statement, "Disability papers put on medical director's desk."

Three days after this visit, the patient went to the ER in a small town near the medical center where his examinations and treatment had started. He received some "pain medicine" for his severe headache on this first visit to the small town ER. He returned with the same symptoms twice and, on the same day and during the last visit, he experienced respiratory arrest. A CT was done showing "cerebral edema and a possible posterior fossa tumor." The patient was transported by helicopter to the medical center, where an EEG was compatible with brain death. An autopsy showed a medulloblastoma.

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in January 1993. It is reprinted here with permission.

Loss Prevention Comments

This was an undesirable patient! He gave a history of regular alcohol and drug abuse. In all probability, the first examiner was not convinced that the patient was not continuing to abuse drugs and that his symptoms were, in some measure, due to that. The same physician saw his patient with some regularity for over a month. On the fourth visit, x-rays were done which showed only some straightening of the cervical spine. At that time he properly consulted a well-qualified neurologist, whose examination supported the normal neurologic findings reported from the beginning of the patient's illness.

Perhaps the most tragic thing that occurred in this sad story was the HMO's refusal to allow admission to the hospital. They insisted that the patient was not sick enough to be hospitalized and referred him back to his primary care physician. At that time the patient was experiencing dizziness and difficulty maintaining his balance, in addition to his unrelenting head pain. Within a week the young man was dead!

Even though headache is one of the most common complaints that we deal with, it can be an extremely important symptom. This story chronicles a textbook picture of some organic etiology of the pain. It was unrelenting. As soon as the first dose of medi-

cine wore off, the second was needed. More and stronger medication was required to control the pain, and finally, about six weeks after onset, definite neurologic signs appeared.

Three physicians had a chance to make a timely diagnosis. The family physician, of course, had the longest exposure to the patient. Should he have made a referral to the neurologist sooner? The internist, the senior member of the HMO clinic, who had approved the consultation, was informed by the physical therapist about the problems with dizziness and balance. This information may have been available to the HMO doctors as long as two weeks before the young man's death. As the senior physician of this group, and a board certified internist, should he have initiated a return visit to the neurologist or directly ordered an outpatient CT? Then there is the neurologist. He is supposed to be an expert in these matters! Should he have ordered a CT examination as a part of his consultation? If he had, would the HMO have approved such an examination just on the basis of unrelenting and worsening head pain? During the investigation and development of this litigation, it became increasingly apparent that the jury's answers to all of these questions during trial would probably have been, "Yes!" The case was settled on behalf of all the physicians involved.

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THE MONOCLONAL ANTIBODY, 7E3 AND TREATMENT OF CORONARY ARTERY DISEASE

The pathophysiology of acute myocardial ischemia is the development of an intracoronary thrombus. The thrombus is responsible for the development of acute ischemia syndromes ranging from unstable angina pectoris, acute myocardial infarction (both non-Q-wave and Q-wave), to sudden cardiac death.

A fractured endothelial surface with platelet deposition and coagulation factors contribute to thrombus growth. Modulation of platelet activity has been a recent target of molecular biology and has been propelled forward with understanding of the architecture of the platelet surface. A host of platelet receptors has now been characterized, most importantly the glycoprotein IIb/IIIa family. The IIb/IIIa receptor was characterized in the early 1980's and mediates platelet aggregation by blocking binding of fibrinogen and von Willebrand's factors.

A monoclonal antibody to the GP IIa/IIIa receptor, 7E3 has been evaluated in clinical trials. 7E3 produces direct, dose dependent, inhibition of the glycoprotein IIb/IIIa cellular receptor. It is a potent inhibitor of platelet function, and therefore, has profound implications to decrease the occurrence of thrombus-mediated acute myocardial ischemia. Several recent clinical trials have been reported which prove remarkable efficacy of this agent.

EPIC

The EPIC (Evaluation of C7E3 Fab in the Prevention of Ischemic Complications) trial was a double-blind placebo controlled study of 2099 high risk patients undergoing coronary angioplasty. Patients were randomized to receive either a bolus of 7E3 followed by a

12-hour infusion of the active agent, a bolus of 7E3 followed by a 12-hour infusion of a placebo, or both a placebo bolus and infusion. The primary endpoint was death, myocardial infarction, or a recurrent ischemic event. Patients were followed for 30 days after randomization for these events.

The composite endpoint occurred in 12.8% of the placebo group, 11.5% of the bolus only group, and 8.3% of the bolus and infusion group (0.008% versus placebo). This 35% reduction in adverse ischemic complications was an important clinical finding and indicates that 7E3, when used in conjunction with aspirin, could further enhance the safety of coronary angioplasty. The price to pay, however, was a higher number of adverse bleeding events which were largely confined to the local vascular access site.¹

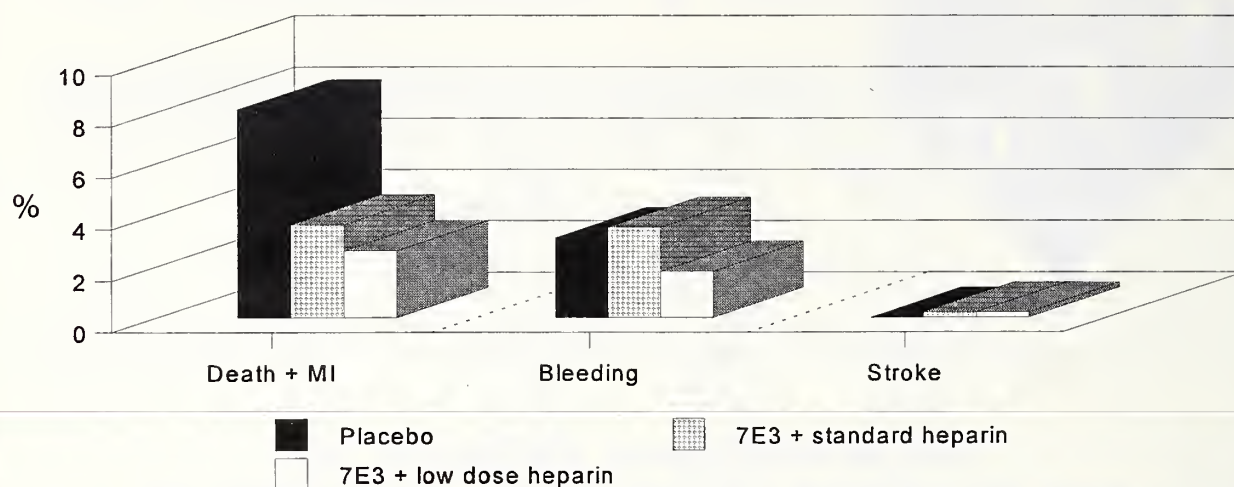
EPILOG

The EPILOG (Evaluation of PTCA to Improve Long-term Outcome by C7E3 Glycoprotein IIb/IIIa receptor blockade) trial was an important study to evaluate the interaction of 7E3 and heparin in low-risk patients undergoing coronary intervention. EPILOG was designed to determine if the local vascular access site bleeding was related to the monoclonal antibody or heparin. This trial was prematurely stopped due to a remarkable improvement in patient outcome with the use of the agent (Figure 1). An interim analysis of the first 1500 patients showed a significant reduction in the occurrence of death and myocardial infarction with the use of 7E3. This represented an exciting breakthrough in the field of interventional cardiology and platelet glycoprotein IIb/IIIa receptor blockade. These results represent a very strong important protective effect of the use of the monoclonal antibody to prevent

* Dr. Talley is Professor of Internal Medicine & Associate Director, Division of Cardiology, UAMS.

Figure 1

Key Results from EPILOG



Abbreviations: EPILOG = Evaluation of PTCA to Improve Long-term Outcome by C7E3 Glycoprotein IIb/IIIa receptor blockade, MI = myocardial infarction.

Figure 1: The use of the monoclonal antibody, 7E3, directed at the glycoprotein IIb/IIIa platelet receptor dramatically decreased the occurrence of acute ischemic complications after coronary intervention. It should be noted that this benefit was not obtained at the cost of increased bleeding or intracranial hemorrhage.

death and myocardial infarction with coronary intervention.²

The investment community embraced these promising results. Within four hours after the release of the data, 10,000,000 shares of Centocor, Inc. (Malvern, Pa., Nasdaq-NNM:CNTO) stock were traded, doubling its value.

CAPTURE

The CAPTURE (Chimeric 7E3 Anti-Platelet Therapy in Unstable angina Refractory to standard treatment) trial was performed in Europe. CAPTURE evaluated the efficacy of 7E3 compared to standard therapy (heparin, aspirin, or nitroglycerin) in patients with unstable angina pectoris. The primary endpoint was a composite of death, myocardial infarction, and need for urgent revascularization within 30 days after randomization. As with EPILOG, CAPTURE was prematurely stopped due to a dramatic improvement in decreasing clinical events in patients who received the drug.³

IMPLICATIONS

Blockade to the glycoprotein IIb/IIIa receptor with the monoclonal antibody 7E3 has confirmed the linkage of platelet deposition and acute myocardial ischemia. Prevention of platelet aggregation with the use of this potent antiplatelet agent decreases adverse clinical events in patients with unstable angina pectoris or undergoing coronary angioplasty. When the results

of EPILOG and CAPTURE are reported and published (anticipated in 1996), 7E3 holds the promise of increasing the margin of safety of patients with unstable ischemic syndromes. The use of this agent, or an agent of similar activity, may well become "the standard of care" in patients with acute myocardial ischemia in the near future.

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3. New Releases. Preliminary results of the CAPTURE trial. December 20, 1995.

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State Health Watch

Information provided by the Arkansas Department of Health

Update on Reporting Diseases to ADH

To make disease reporting less burdensome, the Instructions for Reporting Communicable Diseases to the Arkansas Department of Health have been revised. Disease reporting is an important link between the public and private health sectors, as is often demonstrated.

The revised sheet of instructions and listing of reportable diseases is included on the next two pages of this issue of the Journal, and may be removed for use *ad lib*. Please note the information suggested for inclusion with reports. When insufficient information is reported, follow-up is more difficult and time-consuming, both for the Health Department and for providers.

Many have expressed concern with duplicate reporting. The occurrence of duplicate reports is extremely minute, and the possibility should not deter reporting. If duplicate reports are received, the surveillance system easily detects them and no problems result.

Calls to 1-800-482-8888 are answered automatically, and reports may be made at any time. If a more personal contact is desired, please call 661-2893.

Influenza Update

Arkansas

Through early January 1996, the Arkansas Department of Health has obtained 17 positive influenza cultures for the 1995-96 influenza season. 16 are type A (subtype unknown) and one is type B. Counties with culture-confirmed type A influenza are Ashley, Baxter, Bradley, Cleburne, Craighead, Cross, Garland, Little River, Pulaski, Washington and White. The type B culture was submitted from Pulaski County.

United States

Through the week ending December 16, 1995, influenza type A(H1N1) has been reported from 26 states, A(H3N2) from 14 states, A(not subtyped) from 37 states and influenza B from 9 states.

More information on influenza in Arkansas may be obtained by calling the Arkansas Department of Health, Division of Communicable Disease & Immunization at (501) 661-2784.

The University of Arkansas College of Medicine
Department of Neurology and the Office of Continuing
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March 15-16, 1996

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Guest Faculty

Robert A. Fishman, M.D.

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Dysfunction

The University of Arkansas College of Medicine
ARKANSAS DIABETES PROGRAM and the Office
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Association, Arkansas Affiliate; and the
Geriatric Research Education & Clinical Center
John L. McClellan Memorial Veterans Hospital

presents

Diabetes Update 1996

April 13, 1996

Holiday Inn West

Little Rock, Arkansas

Guest Faculty

**Julio V. Santiago, M.D., and
Madelyn L. Wheeler, R.D., M.S., C.D.E.**

For more information contact:
Office of Continuing Medical Education, 4301
West Markham, Slot 525, Little Rock, AR 72205

Instructions for Reporting Diseases to

Instructions for Reporting Communicable Diseases to the Arkansas Department of Health

The "Rules and Regulations Pertaining to Communicable Disease Control" adopted by the Arkansas State Board of Health in 1977 pursuant to the authority conferred by Act 96 of 1913 (Arkansas statutes, 1947, Section 82-110) Section III, states "The responsibility for reporting certain communicable diseases is the duty of **EVERY** physician, practitioner, nurse superintendent or manager of a dispensary, hospital, clinic, nursing or extended care home and laboratory personnel examining human specimens resulting in the diagnosis of notifiable diseases or any person in attendance on a case of any disease or conditions declared notifiable."

The following diseases of public health significance are to be reported to the Arkansas Department of Health at 1-800-482-8888 within 24 hours of diagnosis.

The reports should include:

1. The reporter's name, location and phone number.
2. The name of the disease reported and the onset date.
3. The patient's name, address, phone number, age, sex and race. (PLEASE spell the patient's name.)
4. The attending physician's name, location and phone number.
5. Any treatment information, if known.
6. Any pertinent laboratory or other information used in the diagnosis.

Individuals desiring to further discuss reportable diseases or wanting additional copies of these instructions may phone the Division of Epidemiology at 661-2893 during normal business hours.

REPORTABLE DISEASES AND CONDITIONS

AIDS*
Amebiasis
Anthrax
Aseptic Meningitis*
Blastomycosis
Botulism
Brucellosis*
Campylobacter Enteritis
Cat Scratch Disease

DISEASES FOR WHICH ONLY OUTBREAKS OR UNUSUAL INCIDENCE NEED BE REPORTED

(Telephone report should include the suspected disease, physician's name, number of cases and interval during which the cases were seen.)

Malaria*
Meningitis, Haemophilus influenzae Type B*
Meningococcal Infections*
Mumps
Pertussis (Whooping Cough)*
Pesticide Poisoning
Plague
Poliomyelitis*
Psittacosis (Ornithosis)*
Q Fever
Rabies, Animal
Acute Upper Respiratory Disease

Remove for future reference

the Arkansas Department of Health

- Chickenpox
- Conjunctivitis
- Dermatophytosis (Ringworm)
- Enteropathogenic *E. coli*
- Diarrhea
- Epidemic Diarrhea of Unknown Etiology
- Gastroenteritis
- Herpangina
- Hospital Acquired Infections
- Infectious Mononucleosis
- Influenza (Outbreaks to be reported by estimated numbers)
- Pediculosis
- Pleurodynia
- Pneumonia (bacterial, mycoplasma, viral)
- Staphylococcal Infections
- Streptococcal Infections

* Additional information will be requested.

- Rabies, Human
- Rash Illness (Including Measles* and Rubella*)
- Relapsing Fever
- Reye Syndrome*
- Rheumatic Fever
- Rocky Mountain Spotted Fever*
- Salmonellosis
- Shigellosis
- Smallpox
- Syphilis*
- T. Cell Helper CD4
- Lymphocyte Count*
- Tetanus*
- Toxic Shock Syndrome*
- Toxoplasmosis
- Trichinosis*
- Tuberculosis*
- Tularemia*
- Typhus Fever
- Yellow Fever

REPORTABLE OCCUPATIONAL DISEASES

Asbestosis
Byssinosis
Pneumoconiosis (Coal
Workers)
Mesothelioma
Silicosis

- Chancroid
- Chlamydial Infections
- Cholera
- Coccidioidomycosis
- Congenital Rubella Syndrome*
- Diphtheria
- Ehrlichiosis
- Encephalitis, all types
- Enterohemorrhagic E. coli 0157:H7
- Food Poisoning, all types
- Giardiasis
- Gonococcal Ophthalmia
- Gonorrhea*
- Granuloma Inguinale
- Guillain-Barre Syndrome*
- Hemolytic-Uremic Syndrome
- Hepatitis (Type A, B, non A-non B, or unspecified)*
- Histoplasmosis
- H.I.V. (Human Immunodeficiency Virus)*
- Influenza (When viral type has been determined)
- Kawasaki Disease*
- Legionellosis*
- Leprosy*
- Leptospirosis*
- Lyme Disease*
- Lymphogranuloma Venereum

Reports can be made 24 hours a day, 7 days a week.

Rev. 12/95

**TOLL FREE COMMUNICABLE DISEASE REPORTING
SYSTEM
1-800-482-8888**

Remove for future reference

Reported Cases of Selected Reportable Diseases in Arkansas Profile for November 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Nov. 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	14	138	175	127	187	130
Giardiasis	11	121	115	143	126	150
Shigellosis	25	125	182	188	193	201
Salmonellosis	23	308	517	392	534	402
Hepatitis A	54	603	242	73	253	74
Hepatitis B	4	79	53	89	60	90
HIB	0	6	5	8	6	8
Meningococcal Infections	2	33	49	24	55	27
Viral Meningitis	1	30	61	76	62	79
Lyme Disease	0	8	15	8	15	8
Rocky Mountain Spotted Fever	0	29	18	17	18	17
Tularemia	0	20	22	36	23	36
Measles	0	2	1	0	5	0
Mumps	2	7	6	10	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	662	5144	6658	7344	7078	7590
Syphilis	38	982	1208	1437	1324	1612
Legionellosis	0	4	15	6	16	6
Pertussis	1	41	33	17	33	17
Tuberculosis	15	212	223	183	264	209

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Arkansas HIV/AIDS Report

1983-1996

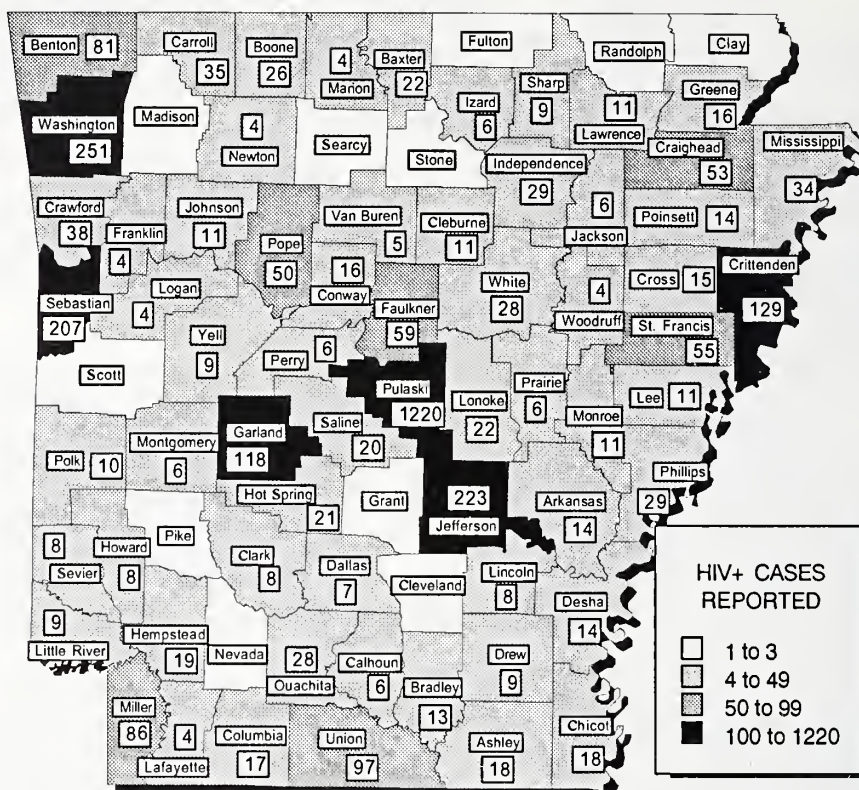
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



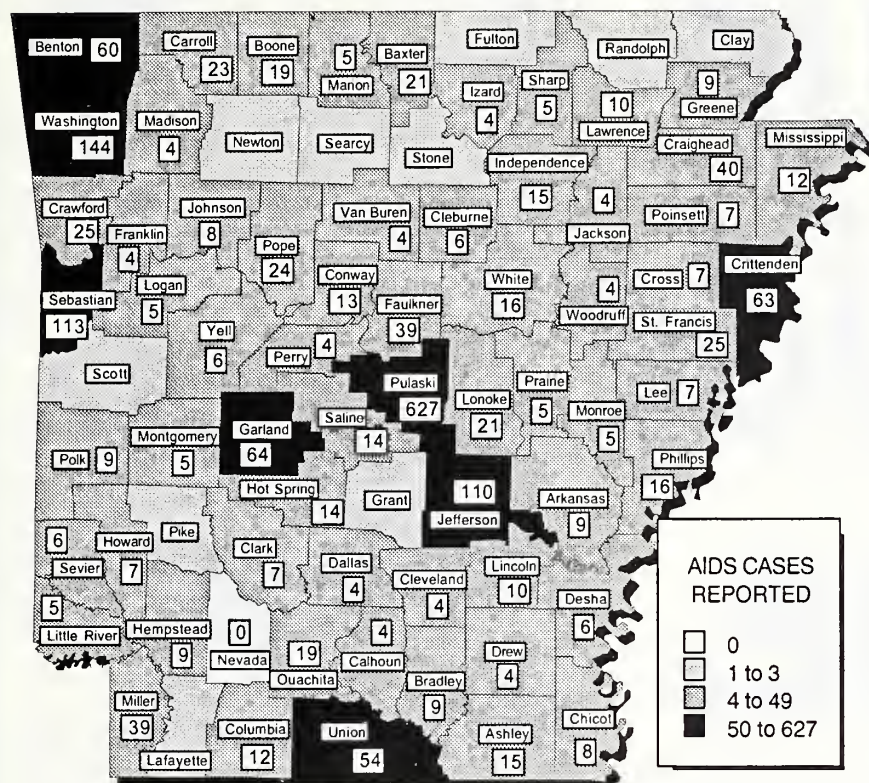
County of residence at the time of test for the 3,406 Arkansans reported to be HIV+. (12/12/95)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	100	215	248	413	400	392	352	367	338	2,825	83
	Female	8	26	37	68	85	81	94	90	92	581	17
AGE	<5	1	1	2	8	13	6	3	7	2	43	1
	5-12	0	1	1	5	1	2	1	0	1	12	1
	13-19	0	7	8	14	19	25	11	22	12	118	4
	20-29	33	110	123	183	149	156	175	145	126	1,200	35
	30-39	44	86	104	196	208	179	168	171	182	1,338	39
	40-49	22	25	35	56	70	67	65	77	70	487	14
	>49	8	6	11	17	22	38	23	35	37	197	6
RACE	White	87	170	174	328	298	293	278	259	261	2,148	63
	Black	21	69	108	151	184	173	163	184	159	1,212	35
	Hispanic	0	1	2	1	3	4	1	7	3	22	1
	Other/Unknown	0	1	1	1	0	3	4	7	7	24	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	141	1,701	50
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	45	516	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	23	234	7
	Heterosexual (Known Risk)	5	25	26	59	64	68	100	88	46	481	14
	Transfusion	5	5	4	6	8	10	0	2	1	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	45	1
	Undetermined	1	20	35	41	23	12	9	34	169	344	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	430	3,406	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,406 Arkansans reported to be HIV+, 1,898 have been diagnosed with AIDS. (12/12/95)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	Total	%
SEX	Male	85	77	70	170	176	250	336	253	238	1,655	87
	Female	5	6	10	20	25	35	64	42	36	243	13
AGE	<5	0	1	1	6	6	3	2	1	2	22	1
	5-12	0	1	0	1	1	0	1	0	2	6	0
	13-19	0	0	0	4	3	2	4	3	1	17	1
	20-29	31	27	24	55	57	81	110	67	58	510	27
	30-39	39	36	41	78	80	128	178	133	124	837	44
	40-49	15	10	7	35	41	52	78	61	52	351	19
	>49	5	8	7	11	13	19	27	30	35	155	8
RACE	White	74	61	58	141	134	206	275	190	174	1,313	69
	Black	16	20	21	47	66	75	121	102	97	565	30
	Hispanic	0	1	0	0	1	3	3	2	3	13	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	7	0
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	126	1,119	59
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	39	274	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	19	153	8
	Heterosexual (Known Risk)	5	3	7	11	12	24	52	41	20	175	9
	Transfusion	2	7	3	7	11	3	2	4	2	41	2
	Perinatal	0	1	1	6	6	3	3	1	3	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	34	2
	Undetermined	0	2	1	3	1	2	2	9	58	78	4
AIDS CASES BY YEAR		90	83	80	190	201	284	400	295	274	1,898	100

Arkansas Department of Health HIV/AIDS Surveillance Program

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New Members

DEQUEEN

Vogan, Cheryl L., Family Practice/Internal Medicine. Medical Education, University of Alberta, Edmonton, Alberta, Canada, 1982. Internship, Charles Camshell General Hospital, 1983 and Residency, University of Alberta, 1987, both in Edmonton, Alberta, Canada.

Wilson, Timothy Alan, Emergency Medicine. Medical Education, University of Mississippi Medical Center, Jackson, Mississippi, 1984. Internship, Dwight David Eisenhower Army Medical Center, Augusta, Georgia, 1985.

FAYETTEVILLE

Miller, George Givens, Cardiology. Medical Education, University of Texas Medical School, Houston, Texas, 1984. Internship/Residency, University of Florida, Gainesville, 1985/1987. Fellowship, University of Texas Medical School, Houston, 1993, and Wm. Beaumont Hospital, Royal Oak, Michigan, 1994. Board certified.

FORREST CITY

Guillermo, Enrique, Internal Medicine. Medical Education, University of the Republic, Uruguay, 1988. Internship, Mt. Sinai, New York, 1992. Residency, University of Tennessee, Memphis, 1995. Board certified.

FORT SMITH

Asi, Wael, Internal Medicine/Pulmonary-Critical Care. Medical Education, American University of Beirut, Beirut, Lebanon, 1986. Internship, American University Medical Center, 1988. Residency, John Hopkins University, 1993. Board certified.

Romero, Alfred Thomas, Cardiology. Medical Education, Autonomous School of Medical Sciences of Central America, San Jose, Costa Rica, 1986. Internship, Jersey Shore Medical Center, Neptune, N.J., 1990. Residency, Jersey Shore Medical Center and Mt. Sinai Medical Center, Miami Beach, Florida, 1995. Board certified.

HARRISON

Leslie, Sharron Johnson, Pediatrics/Family Medicine. Medical Education, UAMS, 1978. Internship/Residency, UAMS, Arkansas Children's Hospital, 1979/1981. Board certified.

HOT SPRINGS

Tapley, David R., Emergency Medicine. Medical

Education, West Virginia School Osteopathic Medicine, Lewisburg, 1986. Internship, University Medical Center, Jackson, Mississippi, 1987. Residency, University of Alabama, Selma Family Medicine, 1989. Board certified.

Young, Evelyn Weatherford, Emergency Medicine/Family Medicine. Medical Education, UAMS, 1987. Internship/Residency, UAMS, 1988/1990. Board certified.

JACKSONVILLE

Washington, Mitzi Ann, Pediatrics/Internal Medicine. Medical Education, UAMS, 1989. Internship/Residency, UAMS and Arkansas Children's Hospital, 1990/1994. Board certified.

Waterhouse, Michael Henry, Family Practice. Medical Education, University of Alberta, Edmonton, Alberta, Canada, 1970. Internship, St. Pauls Hospital, Vancouver, BC, Canada, 1971. Residency, Edmonton General Hospital, 1973.

LITTLE ROCK

Abraham, Dana Carol, Breast Surgical Oncology. Medical Education, UAMS, 1989. Internship/Residency, Baylor University Medical Center, Dallas, Texas, 1990/1994. Board certified.

Fitzgerald, Amy Jean, Internal Medicine. Medical Education, Louisiana State University School of Medicine, Shreveport, 1992. Internship, Louisiana State University Medical Center, Shreveport, 1992. Residency, UAMS, 1995. Board certified.

Garcia-Rill, Susan Ebel, Emergency Medicine. Medical Education, UAMS, 1984. Internship/Residency, UAMS, 1985/1987. Board certified.

Kamanda, Stella M., Hematology-Oncology. Medical Education, St. Louis University School of Medicine, 1989. Internship, St. Louis University, 1990. Residency, Louisiana State University, Shreveport, 1992. Board certified.

Kerns, Kelly Lynne, Anesthesiology. Medical Education, UAMS, 1989. Internship, UAMS, 1990. Residency, Vanderbilt University, Nashville, Tennessee, 1993. Board certified.

Nelson-Adesokan, Paula, M., Dermatology. Medical Education, University of Pennsylvania, Philadelphia, 1990. Internship, The New York Hospital/Cornell University, 1991. Residency, Barnes Hospital/Washington University, 1995. Board certified.

Parham, David Marion, Pathology, Anatomic & Clinical. Medical Education, University of Tennessee, Memphis, 1976. Residency, University of Tennessee, 1980. Board certified.

Silzer, Robert R., Neurology. Medical Education, UAMS, 1988. Internship, UAMS, 1989. Residency, University of Kansas Medical Center, Kansas City, 1993.

Westerfield, Robert E., Cardiovascular Disease. Medical Education, University of Miami School of Medicine, Miami, Florida, 1979. Internship/Residency, UAMS, 1982. Board certified.

MALVERN

Wait, Erik Jon, Obstetrics & Gynecology. Medical Education, University of South Dakota, Vermillion, 1991. Internship/Residency, University of Missouri, Columbia, 1992/1995. Board eligible.

MOUNTAIN HOME

Pritchard, Sharon Jamie, Family Practice. Medical Education, University of Texas Southwestern Medical School, Dallas, 1992. Internship/Residency, AHEC - Northwest, 1993/1995. Board certified.

MULBERRY

Kefri, Maher, Internal Medicine/Pulmonary. Medical Education, Damascus University Medical School, Damascus, Syria, 1988. Internship/Residency, Wayne State University, Detroit, Michigan, 1991/1993. Board certified.

OZARK

Carrick, Garreth, Family Practice. Medical Education, University of Manitoba, Winnipeg, Manitoba, Canada, 1973. Internship, St. Boniface General Hospital, 1974.

RUSSELLVILLE

Ewing, Donald C., Family Practice. Medical Education, Dalhousie University, Canada, 1991. Internship, Dalhousie University, 1992.

Khan, Gul R., Pediatrics. Medical Education, Khyber Medical College, University of Peshawar, Peshawar, Pakistan, 1974. Internship, Lady Reading Hospital, Peshawar, Pakistan. Residency, St. Joseph Hospital, Omaha, Nebraska, 1983.

WARREN

Fort, David B., Jr., General Practice. Medical Education, UAMS, 1993. Internship, AHEC-South Arkansas, 1994.

RESIDENTS

Berry, Michael Fred, Radiology. Medical Education, Louisiana State University Medical College, Shreveport, 1995. Residency, UAMS, 1999.

Marfatia, Vikram S., Rotational/Ophthalmology. Medical Education, Topiwala National Medical School, Bombay, India, 1979. Internship/Residency, Topiwala National Medical School, 1979/1982.

OUT OF STATE

Stocks, Rose Mary, Pediatric Otolaryngology. Medical Education, Medical University of South Carolina, Charleston, 1984. Internship, St. Lukes, Greenville, N.C., 1989. Residency, Kansas University Medical Center, Kansas City, 1990. Board certified.

Pearson, Fran R., Internal Medicine. Medical Education, University of Kansas School of Medicine, Kansas City, 1965. Internship, Kansas University Medical Center, Kansas City, 1966. Residency, Kansas University Medical Center, 1967; St. Lukes Medical Center, New York City, 1970; and University of Texas Health and Science Center, San Antonio, Texas, 1971. Board certified.

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The Arkansas Medical Society Seeks Nominations for the 1996 Shuffield Award

The Arkansas Medical Society is seeking nominations for the 1996 Shuffield Award which will be presented at the annual meeting in Little Rock, May 2 - 4, 1996.

The Shuffield Award is given each year to recognize lay persons in Arkansas who have done outstanding community work in the health care field. The individual might be a newspaper reporter, television personality, government official, teacher or individual promoting a community or other health related program. The person cannot

be a physician or member of a physician's immediate family.

The nominations may come from the county medical societies or any medical society or alliance member. The deadline for receipt of nominations is Thursday, February 29, 1996. Past nominees may be renominated.

If you know someone worthy of this honor, please fill out the form below and return it to the Arkansas Medical Society office.

1996 ARKANSAS MEDICAL SOCIETY SHUFFIELD AWARD

Nominee's name: _____

Highest degree nominee has held: _____

Submitted by: _____

Address of nominee and telephone number: _____

Nominee's place of employment: _____

Title or occupation: _____

Birthplace and year: _____

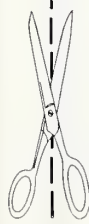
Honors and achievements: _____

Membership in civic clubs or professional organizations: _____

Please attach a short narrative and a curriculum vitae. (Describe nominee's accomplishments and contributions in the area of health care. Please let us know why this person is worthy of this award.)

Please return form and narrative no later than February 29, 1996 to:

**Arkansas Medical Society
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Little Rock, Arkansas 72215
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This section is an expansion of the Hospital Medical Staff Section. It now embraces the growing number of physicians in managed care. The OMSS offers assistance, representation, and a strong, unified voice within these organized settings.

The OMSS is a forum for identifying and initiating policy on issues including: fairness and due process rights, continuous quality improvement, peer review, resource/utilization management, ethics, and leadership.

Any medical staff of a hospital, integrated delivery system, or health care plan may designate an OMSS representative, who

must be an AMA member with active medical privileges. Each staff has one vote — an equal voice, regardless of size.

If you are interested in designating an AMA OMSS representative and/or attending an upcoming meeting, call **800 AMA-3211** and ask for the AMA Department of Organized Medical Staff Services.

We cannot begin to confront the unique challenges facing us without you. Call **800 AMA-3211** today.

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(Place state medical association OMSS contact information here!)

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Outdoor MD

Information provided by
the Arkansas Game & Fish Commission

Bald eagles back at DeGray and apparently healthy

Bald eagles are back at DeGray Lake in southwest Arkansas and are apparently in good health.

A year ago, 29 eagles died at the lake from still-unknown causes - the largest eagle dieoff in the nation's history. The DeGray Eagle Task Force, with staff members of the Arkansas Game and Fish Commission, U.S. Army Corps of Engineers and DeGray Lake Resort State Park, is keeping a close eye on the big birds that winter in Arkansas. Fish and coots form the major part of eagles' diet at DeGray.

No problems have arisen with the eagles this winter. David Baldridge of the Corps of Engineers at DeGray said regular patrols on the lake looking at eagles have recorded as many as 13 birds at one time. An area on the lake's south side near Long Creek, used for several years as a roost by eagles, is again in use. This area was where most of the 29 dead birds were found in late 1994 and early 1995.

Eagles have also been seen in other areas of DeGray, like Arlie Moore, Alpine Ridge, Amity Landing and Shouse Ford, all up the lake from Long Creek, Baldridge said.

A number of volunteers are helping keep an eye on the eagles also. Anyone visiting DeGray Lake who sees an eagle in apparent distress or dead fish, birds or other wildlife around the lake is urged to carefully note the location, to not touch the animals and to go immediately to either DeGray State park Marina or Iron Mountain Marina, where workers will phone Eagle Task Force personnel. Reports can also be made to the Game and Fish Commission's toll-free hotline, 1-800-482-9262.

Bald eagles, the nation's symbol for more than 200 years, declined sharply in numbers because of the ravages of pesticides in the 1950s and 1960s. They went on endangered species lists, and legislation and restoration programs have gradually brought their numbers back.

Eagles have been upgraded from endangered to threatened in federal and state regulations but are still protected under a variety of laws. From a small number of eagles seen in the winter in the 1970s, eagle numbers have climbed to around 1,000 in the 1990s. They are usually seen close to water, such as lakes like DeGray and along the Arkansas and other rivers.



Statistics show tree stand accidents follow a pattern

Some statistics from the Arkansas Game and Fish Commission about tree stand hunting accidents, the leading cause of hunting mishaps:

- 75 percent of accidents are with homemade stands (versus factory-produced stands).

- 60 percent of accidents happen when the hunter is climbing up or down, not while on top.

- 84 percent of Arkansas accidents involved persons who have not taken a hunter education course.

- 75 percent of tree stand accidents result in moderate (doctor's treatment) to severe (hospitalization) injuries.

Deer season opening dates set

To help hunters schedule vacations and prepare for gun deer season in 1996 and 1997, the Arkansas Game and Fish Commission has set opening dates. Deer season will open this year on Saturday, Nov. 9, 1996, and next year on Saturday, Nov. 8, 1997.



1996 Fishing Regulations booklets available

The 1996 Fishing Regulations booklets of the Arkansas Game and Fish Commission are available to sportsmen across the state at license dealers and sporting goods outlets, as well as regional offices of the Commission.

The free booklets contain a variety of information including regulation changes that went into effect January 1. (One regulation in particular is the state's Smallmouth Bass Management Plan.) Full color illustrations show the differences in species of black bass, striped bass, white bass and hybrid bass and in the four Arkansas species of trout.

more Outdoor MD on next page



Legislation threatens duck populations, future hunting seasons

Pending federal farm bills could drastically reduce duck breeding areas and lead to sharply curtailed hunting seasons, said Steve N. Wilson, director of the Arkansas Game and Fish Commission.

The Wildlife Management Institute (WMI) said the bills, H.R. 2542 and S. 1373, could mean the destruction of more than 78 percent of all duck breeding ponds in the U.S. and up to 90 percent of prairie pothole wetlands.

The U.S. Fish and Wildlife Service said much lower duck populations will follow, resulting in the probable closure of up to a third of future duck hunting seasons.

Provisions in the bills currently in the House (H.R. 2542) and Senate (S. 1373) Agriculture Committees would jeopardize recent gains made in waterfowl population levels by stripping protection for small wetlands and allowing farmers to continue receiving taxpayer-financed subsidies while draining ponds of less than one acre and all farmed wetlands, WMI said.

"I urge hunters and conservationists to voice their concern directly to their congressional delegation regarding the new Farm Bill and revisions to the Clean Water Act," Wilson said. "We must request the continuation of both wetland protection as provided by the Clean Water Act and the Swampbuster provision, and support funding for conservation incentive programs such as the Conservation Reserve Program and the Wetland Reserve Program."

Currently, farmers cannot receive subsidy payments if they drain wetlands or convert farmed wetlands to non-wetlands. Known as Swampbuster in the Food Security Act of 1985, this provision acts as a condition for receiving public funds rather than a regulatory program and has helped successfully keep agricultural-related wetland loss to a minimum, said David Long of Jonesboro, agricultural liaison for the Game and Fish Commission.

Other changes in the definition of wetlands in two other pending bills, H.R. 961 and S. 851, would remove protection completely for many wetlands now covered under Section 404 of the Clean Water Act of 1986. This law requires a permit by the U.S. Army Corps of Engineers before wetlands may be dredged or filled.

The combined effect of these proposed changes in wetland protection measures would be drastic and immediate, said Jon Schneider of Stuttgart, wetlands coordinator for the Game and Fish Commission. The White House Working Group on Wetlands estimated 65 to 75 percent of the nation's remaining wetlands would be lost, with varying

percentages in each state. The U.S. Department of Agriculture's Natural Resources Conservation Service, in a study soon to be released, estimates virtually all farmed wetlands would be converted to non-wetlands, and 82 percent of the remaining small wetlands now subject to

Swampbuster protection would be exempt, with the rate of loss expected to approach one million acres annually.

"Small wetland basins provide critical duck breeding habitat, and farmed wetlands of all sizes are essential to both breeding and wintering waterfowl," Schneider said. In the prairie pothole region of North and South Dakota, Montana, Minnesota and Iowa, 78 percent of wetland basins are one acre or less, 91 percent are five acres or less, and 95 percent are 10 acres or less according to the WMI estimates.

"Recent gains made in waterfowl populations and hunting opportunity are the direct result of protection for all sizes of wetlands, improved rainfall on the duck breeding grounds to fill these ponds, and the provision of grassland nesting habitat through the Conservation Reserve Program," said Schneider. "Continued protection for all sizes of wetlands and conservation incentives like the CRP are essential to future duck hunting opportunity in Arkansas. We can't allow subsidized wetland destruction and expect high duck populations and liberal seasons."

In addition to the outright closure of one of three seasons as predicted by the Fish and Wildlife Service, permitted seasons would be greatly reduced, Schneider added.

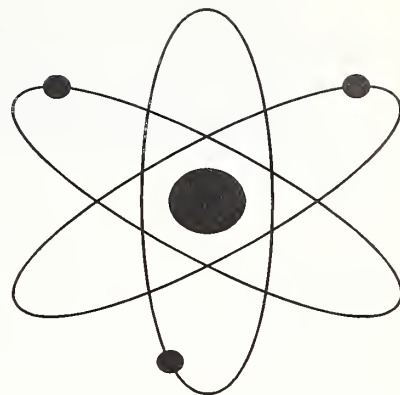
The Wildlife Management Institute said a loss of protection for small and farmed wetlands will cause an average reduction in Arkansas of up to 21,039 ducks in the harvest, 17,680 hunter-days of opportunity, and \$548,086 in hunter expenditures per year when seasons are permitted. This lost hunting opportunity would mean a loss of \$1.3 million in waterfowl-related retail sales in Arkansas alone, WMI said.

"A study by Southwick Associates said a recent waterfowl hunting season in Arkansas resulted in over 700 jobs, \$10,717,000 in earnings, \$20,214,000 in retail sales, and \$628,000 in state sales tax. The total effect of this activity in Arkansas was a \$41,296,000 boost to our economy," Schneider said.

H.R. 961 has been passed, and hearings have been held on S. 851. As of January 17, 1996, there had been no formal committee debate on H.R. 2542 and S. 1373, but is expected soon.



Radiological Case of the Month



Steven R. Nokes, M.D.
W. Bradley Pierce, M.D.

History:

A routine second trimester fetal ultrasound was performed (Figure 1) which prompted follow-up exams and a CT scan of the chest after birth (Figure 2).

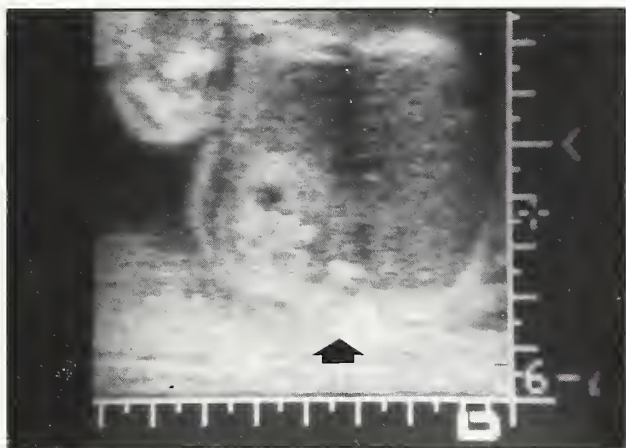


Figure 1



Figure 2

Figure 1: Second trimester fetal ultrasound. The image is transaxial in the lower chest of the fetus. The spine is marked with an arrow.

Figure 2: CT scan of the infant chest at the level of the lower chest.

Cystic adenomatoid malformation

Diagnosis:

Cystic adenomatoid malformation

Radiographic Findings:

The ultrasound reveals a round hyperechoic mass in the right lung base. There is no midline shift of fetal hydrops. The CT scan demonstrates a well circumscribed multicystic mass in the right lower lobe.

Discussion:

Prenatal sonography demands careful attention to the echogenicity of the lungs to detect fetal lung masses. While these lesions are rare, diagnosis is important as there is an approximately 40 percent risk of death and a 10 percent incidence of associated anomalies. The differential diagnosis at the time of the ultrasound includes cystic adenomatoid malformation (CAM), pulmonary sequestration, bronchogenic cyst, thoracic neuroblastoma, tracheal or bronchial atresia, congenital lobar emphysema and pulmonary arteriovenous malformation.

CAM is a hamartomatous lesion characterized by excessive growth of the terminal respiratory bronchioles. It is typically unilateral involving only one lobe or segment. Three pathologic subgroups are recognized, macrocystic, medium sized cystic, and solid. The prognosis of a fetus with CAM is adversely affected by polyhydramnios, fetal hydrops and large lesions with mediastinal shift.

Occasionally, these lesions may regress in utero without intervention, and serial ultrasounds are performed. Large lesions with hydrops have been successfully resected in utero.

References:

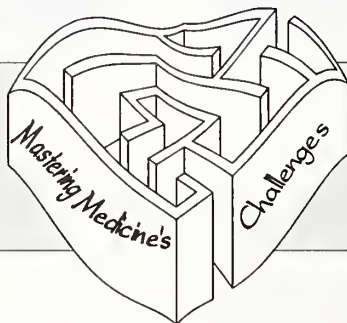
1. Bromley B, Parad R, Estroff JA, Benacerraf BR. Fetal lung masses: prenatal course and outcome. J Ultrasound Med 14:927-936, 1995.
2. Budorick WE, Pretorius DH, Leopold CR, et al. Spontaneous improvement of intrathoracic masses diagnosed in utero. J. Ultrasound Med 11:653, 1992.

Editor: Steven R. Nokes, M.D., is associated with Radiology Consultants in Little Rock.

Contributor: W. Bradley Pierce, M.D., is associated with Radiology Consultants in Little Rock.

Mark Your Calendar!

**AMS Annual
Meeting**



May 2 - 4, 1996

**Excelsior Hotel & Statehouse Convention Center
Little Rock, Arkansas**

See page 444 for details

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In Memoriam

C. Lynn Harris, M.D.

Dr. C. Lynn Harris, of Hope, died Tuesday, December 26, 1995. He was 72. He is survived by his wife, Margaret Rawson Harris, Hope, AR; one son, Stephen O. Harris, Nash, Texas; two daughters, Candice Blackwell, Nashville, AR; Marilyn Wallace, Montgomery, AL; five grandsons, Jason Radcliff, Fayetteville, AR, Jamie Radcliff, Nashville, AR, Harrison Wallace and Landon Wallace, both of Montgomery, AL, Stephen Beck Harris, Nash, Texas; his mother, Wilmeth Harris, Hope, AR; four brothers, Jim Harris, Celera, OK, Dr. W.D. Harris, Springdale, AR, Dr. Lowell Harris, Hope, AR, Gerald Harris, Pearland, Texas; two sisters, Gwen Wells, Bradford, AR, Sarah Davis, De Queen, AR.

Norman Ray Hill, M.D.

Dr. Norman Ray Hill, of Lake Village, died Friday, December 22, 1995. He was 38. He is survived by his wife, Dr. Shirlene Hill; a son, Jeremy; daughters, Melony and Shirlena Brooke; his father, four brothers and two sisters.

William G. Lockhart, M.D.

Dr. William G. Lockhart, of McGehee, died Sunday, December 17, 1995. He was 68. He is survived by his wife, Carla Elisabeth Ford; four children, Dana Elisabeth Cruz of Oklahoma City, Melissa Lynne Lockhart of Mesa, Arizona, Anne Kerry Lockhart of Fort Smith and Kirby Lockhart of Little Rock; one brother, Thomas Kirby Lockhart of Decatur, Georgia; and two granddaughters, Audrey Elisabeth Lockhart of Little Rock and Sara Elisabeth Cruz of Oklahoma City.

William Alfred Runyan, M.D.

Dr. William Alfred Runyan, of Little Rock, died Wednesday, December 20, 1995. He was 53. He is survived by his wife, Lola Stewart Runyan; two daughters, Laura Kathryn Holley of Ft. Worth and Caroline Elaine Runyan of Little Rock, and a brother, Lt. Col. B. Frank Runyan of Hot Springs.

Glenn P. Schoettle, M.D.

Dr. Glenn P. Schoettle, of West Memphis, died Friday, December 22, 1995. He was 73. He is survived by his wife, Dottie Schoettle of West Memphis; a daughter, Susan Schoettle-Gumm of Sarasota, Florida; three sons, Dr. Glenn Phillip Schoettle, Jr. of Memphis, Tenn., Dr. Tim Schoettle of Nashville, Dr. Steve Schoettle of West Memphis; a brother, Dr. Roy Schoettle of Houston, Texas.



Things To Come

ARKANSAS LOCATION

February 28

Improving Efficiency of Primary Care Practice: Coding and Reimbursement - via interactive television. Several locations throughout Arkansas. Sponsored by The Department of Family and Community Medicine, University of Arkansas for Medical Sciences and Arkansas Academy of Family Physicians. For more information, call 501-661-7962.

March 13 - 15

4th Annual Refresher Course and Update in General Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

March 18 - 22

PET and SPECT Imaging in Cancer Diagnosis and Treatment. Ihilani Resort and Spa, Kapolei, Hawaii. Sponsored by the Johns Hopkins University School of Medicine. For more information, call (410) 955-2959 or (410) 955-8582.

March 21 - 22

Clinical Pulmonary Update. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

March 27 - 30

6th Annual Challenges in the Clinical Practice of EMERGENCY MEDICINE. Presidente Inter-Continental Resort, Cozumel, Mexico. Sponsored by Symposia Medicus. For more information, call (510) 935-7889 or (800) 327-3161.

ARKANSAS LOCATION

March 28 - 30

Symposium on Critical Care and Emergency Medicine. The Arlington Resort Hotel and Spa, Hot Springs, Arkansas. Sponsored by the University of Arkansas for Medical Sciences and The University of Tennessee, Memphis College of Medicine. For more information, call (501) 661-7962.

April 26 - 28

1996 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Sponsored by the Alton Ochsner Medical Foundation and the Tulane University School of Medicine. For more information, call (504) 842-3702 or (800) 778-9353.

April 26 - May 3

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

ARKANSAS LOCATION

May 2 - 4

Arkansas Medical Society 1996 Annual Convention. Excelsior Hotel and Statehouse Convention Center, Little Rock, Arkansas. For more information, call (501) 224-8967 or 1-800-542-1058.

May 13 - 24

7th Annual Tropical Health Update. Tulane University School of Public Health & Tropical Medicine, New Orleans, Louisiana. Sponsored by the Office of Continuing Education and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

June 6 - 9

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

July 25 - 27

Clinical Allergy for the Practicing Physician. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

To

those physicians who volunteer
through the Arkansas Health
Care Access Foundation,

Thank You!

As you can see from a sampling of
letters we have received, your
involvement in our program is
appreciated and in many
cases life-saving.

It has been three days since you
sent me to the doctor and I have
a ways to go to be 100%, but I can
breathe and walk across the room
now. I had given up hope almost,
and I remembered Arkansas Health
Care. The doctor gave me two of
the medicines I needed and the
pharmacy you sent me to filled the
"chewed" me out for not coming in
two weeks previously. I'm starting
to feel good again. God bless you.

Western Wildlife

As Easterners moved West, pioneers
found animals as exotic as the land.
buffalo, prairie dogs, bears, beaver,
sheep, cougars, wolves and rattlesnakes.
The eagle became a national symbol.

I wanted to thank everyone
involved with this
program. We had no
one else to turn to
and we were in desperate
need of doctors and
medications.
Your program has
helped us through a very
difficult time.



Arkansas Health Care Access
Foundation

P.O. Box 56248

Little Rock AR

72215-6248

I would like to say thank you first
of all. Your program made it
possible for me to have a
mammogram when I had no
where else to turn. I did not
realize there was such a program.
...it is a much needed program.
Thanks again.

For more
information
on how
you can help,
call AHCAF at
(501) 221-3033
or (800) 950-8233



Arkansas Health Care
Access Foundation, Inc.

Due to your generous
assistance, I was able to
see an eye doctor and no
longer fear the loss of my
vision. Thank you all for
being there.

When I needed medical
attention, I was blessed with the
knowledge of your program.
There were kind and helpful
people to guide me.

THANK YOU FOR MAKING THE DIFFERENCE!

Keeping Up

February 23

Aspects of Cardio-Thoracic Surgery. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

March 22

Adolescent Pregnancy - Adolescent Sexuality, Perils of Puberty. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

March 15 - 16

Neurology for the Primary Care Physician. Sponsored by UAMS College of Medicine. Location: The Majestic Resort and Spa, Hot Springs National Park. Registration at 7:30 a.m. Category I credit hours offered: 9.25. Fee: \$150 for physicians - \$75 for UAMS Faculty; \$75 for other health professionals; \$40 for residents.

March 28 - 30

Symposium on Critical Care & Emergency Medicine. Sponsored by UAMS College of Medicine. Location: The Arlington Resort Hotel and Spa, Hot Springs. Registration and Continental breakfast at 7:00 a.m. Category I credit hours offered: 11.25. Fee: \$250; Fellows and Residents may attend for \$125 with a letter of verification from their program director.

April 12

Beyond Traumatic Brain Injury in Children and Adolescents. Sponsored by UAMS College of Medicine. Location: Brandon Conference Center, Arkansas Children's Hospital. 8:00 a.m. - 4:30 p.m. Category I credit hours offered: 6. Fee: TBA.

May 9 - 10 & November 16 - 19

Surgical Treatment of Erectile Dysfunction with Penile Prosthetic Implantation. Sponsored by UAMS AHEC - Fort Smith. Location: Crawford County Memorial Hospital, Van Buren. Fee: \$350. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

June 23 - 28

Intensive Workshop in Health Care Ethics. Sponsored by UAMS Division of Medical Humanities. Location: Freeway Medical Center, Suite 500, Little Rock. Fee: \$375 - includes all course materials, breakfast, receptions and two dinners. Category I credit hours offered: TBA. For more information, call: 501-661-7970.

June 28

Annual AHEC Fort Smith CME Seminar. Sponsored by UAMS AHEC - Fort Smith. Location: Holiday Inn, Fort Smith. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium

Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Wednesday, July 3, 12:00 noon, Southwestern Bell/Arkla room.
Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.
Interdisciplinary AIDS Conference, April 12th only in Smith Room
Journal Club, March 12th Conference only in Medical Affairs Conference Room
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, 1st Tuesday in March, May and July

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock
Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293
Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month

LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas

Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

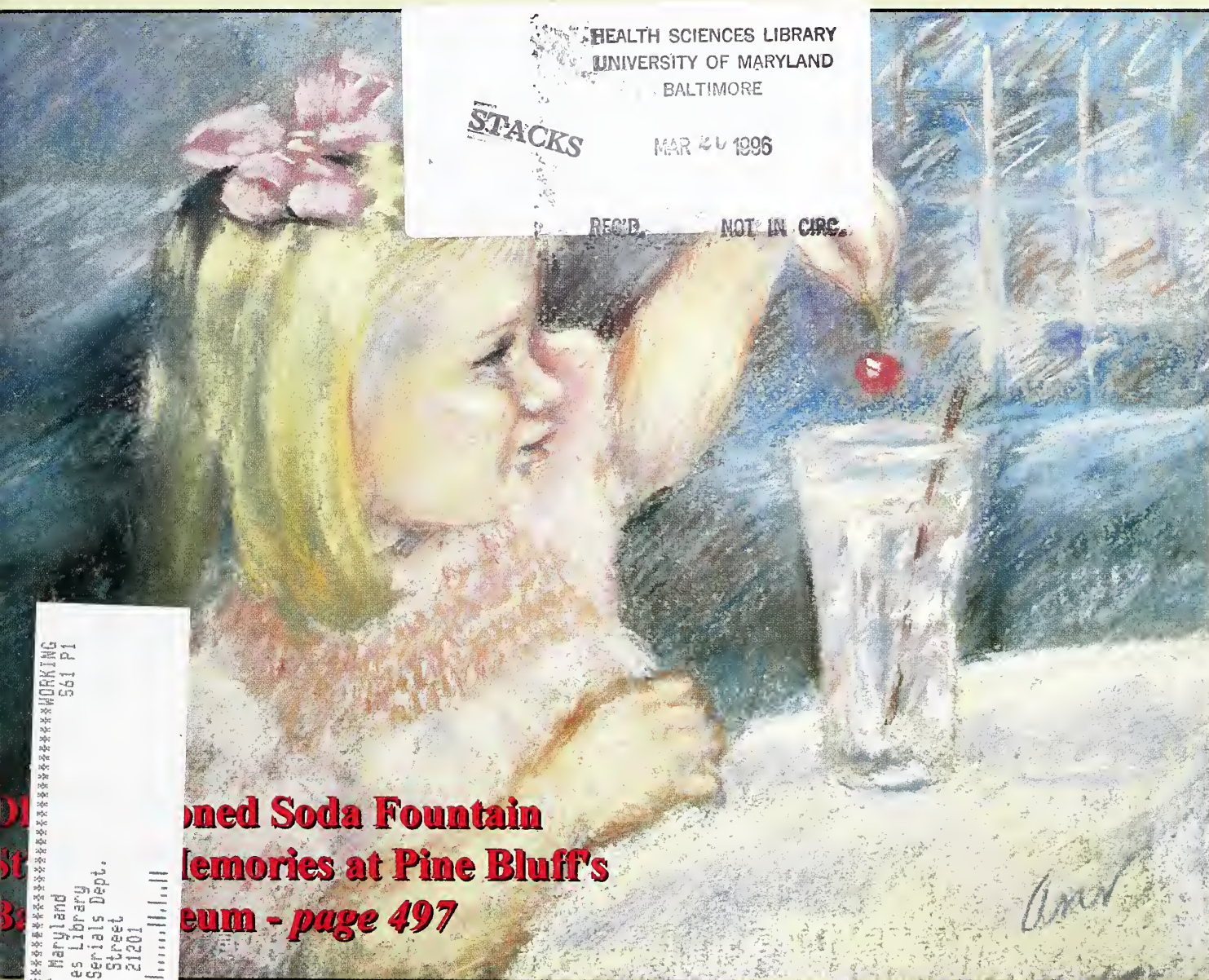
TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Residency Noon Conference, Mondays through Thursdays, 12:00 p.m., AHEC-Southwest Family Practice Clinic
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 10

March 1996



**oned Soda Fountain
Memories at Pine Bluff's
Museum - page 497**

One physician's connections led him from one journey to the next - page 484

Physician Communication - page 505

Dicrotism: Examples and Review of the Dicrotic Pulse - page 507

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Managed Care: *Global or Local?*



Arkansas Managed Care Organization Serves Local Partnerships Providing Community Care.

The world of managed care is expanding, often ignoring the benefits of local partnerships among employers, employees, doctors and hospitals. The global outlook suggests restricted health care delivered *only* by those providers who agree to lower rates in return for guaranteed patients. Arkansas Managed Care Organization (AMCO) believes there is a better way to reduce cost and ensure quality care.

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AMCO's local partnerships mean physicians can still practice where patients live, while experiencing practice growth through local employer contracts. The link between managed care and community care combines the benefits of a statewide network with the security and convenience of hometown medical attention.

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Volume 92 Number 10

March 1996

CONTENTS

FEATURES

- 484 **Walk Together, Talk Together**
Editorial
Ben N. Saltzman, M.D.
- 487 **Medicine in the News**
Health Care Access Foundation Update
National HIV Telephone Consultation Service for Health Care Providers
Domestic Violence Video Available/Medical Alliance Awareness Month
AMA Guidelines for Physician Responsibilities in Subacute Care
Transmission of HIV by Transfused Blood
State Teen Birth Rate is Up
Unmarried Arkansans are at least three times more likely to drive drunk
- 491 **Arkansas Medicaid Fact Sheet**
- 495 **New Member Profile**
John M. Allen, M.D.
- 497 **Old Fashioned Soda Fountain Stirs Up Memories at Pine Bluff's Band Museum** • • •
Sheila Yount
- 499 **Antiretroviral Therapy 1996**
Special Article
Joseph M. Beck, M.D.
- 501 **Introduction of Newborn Screening for Galactosemia to Arkansas**
Scientific Article
Robert West, M.D.
James B. Gibson, M.D., Ph.D.
- 505 **Physician-to-Physician Communication**
Loss Prevention Case
J. Kelley Avery, M.D.
- 520 **Hayden Coler Nicholson, M.D. (1904 - 1995)**
Edwina Walls, MLS, AHIP

Cover Story

DEPARTMENTS

- 493 **AMS Newsmakers**
507 **Cardiology Commentary & Update**
509 **State Health Watch**
512 **Arkansas HIV/AIDS Report**
514 **Outdoor MD**
515 **New Members**
517 **Radiological Case of the Month**
521 **In Memoriam/Resolutions**
522 **Things to Come**
523 **Keeping Up**

Cover art provided by the Arkansas Artists Registry, a part of the Arkansas Arts Council, an agency of the Department of Arkansas Heritage. Artwork, titled "Superior Shirley Temple," is a pastel by freelance artist Ann Downus of Magnolia.

Walk Together, Talk Together

From the Panama Canal Zone to the Arkansas Medical Society, learn how one physician's connections and friendships led him from one journey to the next

Ben N. Saltzman, M.D.*

From the Panama Canal Zone

It all began for me in June of 1940 when I graduated from the University of Oregon College of Medicine and landed in Ancon in the Panama Canal Zone as a brand new intern at Gorgas Hospital. The first staff member I met was night nurse, Betty Bohan, who called me at 2 a.m. to inform me that I was *Doctor of the Day* and that the M.P.'s had brought in a G.I. who was wildly drunk and was disrupting the entire hospital. I could hear the noise on the telephone. Now, Miss Bohan was a very attractive young lady and much more knowledgeable than the *Doctor of the Day*, who had never given a shot to a patient, let alone know what kind to give. The soldier was shouting at the top of his lungs and was being held down by two orderlies and two M.P.'s. I admitted my ignorance and asked for guidance. She suggested a shot of apomorphine. If I would order it, she would give it. The result was almost instantaneous. Within three minutes, the soldier became amazingly quiet. He was led to a cell, retched once and went off to sleep.

I felt that I had to get to know this paragon of the nursing profession better, and so, I asked her for a date. I was informed that there were about 100 engineers from the U.S. in the Canal Zone at that time and only about 20 American nurses, and they were dated up for some time to come. I would have to wait my turn.

The staff doctors at Gorgas were half civilian and half military. The military physicians were high ranking and excellent. They undertook the training of the interns and residents and provided us with good hands-on experience. However, I soon began to feel

that I needed more exposure to the art of medicine. Upon inquiring, I learned that I could join the Gorgas Memorial Medical Society in Panama City. In addition, I learned that through this connection, I could also gain membership in the American Medical Association (AMA). This I did forthwith. It was a good experience and was appreciated by the junior staff.

One of the residents at Gorgas Hospital was a Dr. Rector Hooper. He was a graduate of the University of Arkansas College of Medicine. He became a good friend. I later learned that he had married Elaine Bohan, a nurse and sister to Betty, my first acquaintance. This provided me with some ammunition.

After a couple of dates, I asked Betty to marry me and she said yes. Our wedding date was set for December 19, 1941. I had completed my internship and had begun my one-year residency program. While fixing up an apartment in preparation for the big event, we heard President Roosevelt announce over the radio that the Japanese had attacked Pearl Harbor and that we had declared war. This was December 7th. I had a reserve commission in the Army and wondered if I would have to go on active duty elsewhere.

I learned that I would be required to remain in the Canal Zone, assigned to the Army of the United States. Betty and I were wed on the 19th of December and after completing my residency I was assigned to a dispensary in Gamboa, a dredging division town about half way through the Panama Canal. My appointment was a dual one. I was in the Army but detached to the Health Department of the Panama Canal Zone. Actually, we were better off than if we were living in the United States. It was a great learning experience, almost like a family-type practice. Later, I learned that our defenses in the Canal Zone consisted of seven

* Ben N. Saltzman, M.D., is a retired family practitioner from Mountain Home, Arkansas, and a member of the editorial board for *The Journal of the Arkansas Medical Society*.

mortars, four on the Atlantic side and three on the Pacific side. Fortunately, the Japanese felt that taking the Canal would over-extend their support problems.

On the Road to Mountain Home

With the cessation of hostilities, Dr. Hooper and Elaine returned to Arkansas to enter a group practice in Batesville. He became acquainted with a Mountain Home physician, a Dr. Elisha Gray, whose health was deteriorating. Dr. Gray was looking for a physician who could replace him in Mountain Home. Hooper called me suggesting that Mountain Home would be an excellent community for self development and rural practice experience. The town had begun to grow with the completion of a large dam dedicated to the production of hydroelectric power and affording superb recreational facilities, especially for fishing. Another dam was in the planning stage. I had originally planned to seek a residency in psychiatry, since I had already acquired a master's degree in psychology prior to entering medical school. However, the idea of becoming a country doctor appealed to me.

Betty and I arrived in Batesville with our daughter Sue who was one year old at the time. Then Hooper and I drove to Mountain Home over the worst roads I had ever experienced. In fact, upon arriving, I found that the only pavement was around a recently built courthouse in the town square.

The population of Mountain Home totaled 1,200 people; Baxter County totaled 8,000 people. At the time, there was one other physician in active practice. Dr. Gray was a jewel. In letters he wrote to all of his patients stating that he was retiring, he recommended me highly and said that I was bringing modern medicine to the community. He worked with me until I was able to take my state board and basic science exams.

The AMS Connection and Involvement

As soon as I received my license to practice, I joined the Arkansas Medical Society (AMS) under the sponsorship of Dr. Gray and Dr. Hooper. This was the best move I had ever made. It seemed that my attendance at the first AMS medical meeting was the high point of my life. In short order, I became a member of the AMS Public Health Committee and was assigned to the Rural Health Subcommittee. Almost at once, I found myself participating in statewide conferences organized by that committee for the benefit of many of the rural communities of the state. Our attempt was to solve physician shortage problems. Year after year, we reported our progress to the other AMS members. We were able to involve other groups such as the Farm Bureau, the Arkansas Dental Society, the PTA's, the County Judges, the Sheriff's Association, the Arkansas Power and Light Company, the Cooperative Extension Service, the 4-H leadership, the REA and the

various groups active in Public Education.

From this activity we were able to work with the AMA Council on Rural Health. At the annual state medical meetings, I was able to report to the AMS Council on the activities of the Rural Health Committee. Later, I had the privilege of serving on the AMA Council as its chairman. On the state level, I served as treasurer of the Council. I was later elected President of the AMS and served during its 100th year Anniversary. That year, the convention was held in Hot Springs and Max Parrot, the President of the AMA, was our honored guest. Coincidentally, he was my classmate through four years of medical school. It was a pleasant reunion.

AMS Annual Session - A Sort of Homecoming

I have often wondered why so many physicians join the AMS and yet avoid attending its meetings. I have attended each annual session since joining in 1946. Betty is now deceased, but we had fifty-two good years together, and she attended each annual session with me.

I made many friends during the annual sessions and cherished the opportunity of visiting with them. It has seemed to be a homecoming each year. In many ways, I have been associated with my colleagues in numerous voluntary organizations related to the health education and treatment of the people of Arkansas.

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We all have so much in common, and together we can and have accomplished a lot. Over the years we have had excellent leadership. Our medical society staff and our legal associates have helped keep our society a shining example of what can be accomplished by unity. In unity there is strength. Our membership in the AMS and various other organizations has demonstrated this characteristic to the AMA and in the "halls of fame" of many other health related organizations throughout our country.

In the past few years, I have been privileged to

chair the AMS 50-year Club. Unfortunately, I am not always able to identify some of the members. I would liked to have known them over the years.

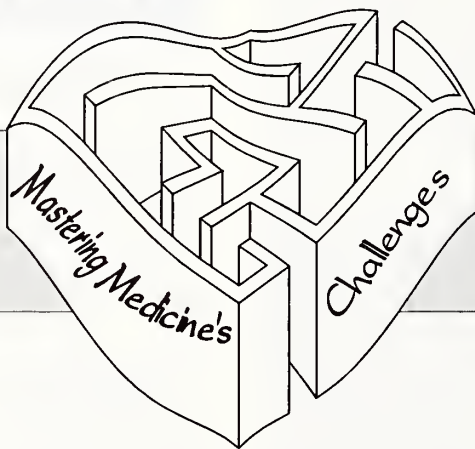
We, in the AMS, are members of a great fraternity. Ethically, we are still number one in the minds of the people we serve. Let us strengthen that trust by improving our acquaintance with each other.

Somewhere, someone in the past in discussing the things that divide us proclaimed, "O ye people of the earth, walk together, talk together, then and only then shall ye have peace." ■



Mark Your Calendar!

***AMS Annual
Meeting***



May 2 - 4, 1996

**Excelsior Hotel & Statehouse Convention Center
Little Rock, Arkansas**

*Watch for a registration form in next month's issue
or call the AMS office at
(501) 224-8967 or 1-800-542-1058*

Medicine in the News

Health Care Access Foundation

As of February 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 10,471 medically indigent persons, received 19,307 applications and enrolled 38,339 persons. This program has 1,720 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

National HIV Telephone Consultation Service for Health Care Providers - 1-800-933-3413

The HRSA/AIDS ETC National HIV Telephone Consultation Service (Warmline), based at San Francisco General Hospital, provides free clinical information and support to physicians and other health care professionals caring for HIV infected patients. The Warmline is staffed by physicians, clinical pharmacists and nurses, expert in the clinical care of symptomatic and asymptomatic HIV disease. Case consultation, drug information, infection control measures and information about HIV prevention are typical topics. Referrals are made to local HIV/AIDS information and education resources through the nationwide network of regional AIDS Education and Training Centers. Warmline staff are available between 7:30 a.m. and 5:00 p.m. (Pacific Standard Time) Monday through Friday, augmented by 24-hour voice messaging. *Funded by the Health Resources and Services Administration and the American Academy of Family Physicians.*

Domestic Violence Video Available in conjunction with Medical Alliance Awareness Month

In recognition of Medical Alliance Awareness Month, which is this month, the AMS Alliance is announcing the availability of a video titled "*Domestic Violence: Identification, Treatment and Referral for the Health Care Professional*," produced in association with UCLA Medical Center. As you know, domestic violence has been a long-standing social issue affecting the health and welfare of countless American families. Recent news events have reminded us of the pressing need to sharpen the skills necessary to detect and effectively deal with this very

serious problem. The video offers effective instruction for multi-discipline team members to effectively identify and assess domestic abuse victims, develop safety plans, treat and intervene, make appropriate referrals and document thoroughly.

"*Domestic Violence: Identification, Treatment and Referral for the Health Care Professional*," provides a tool for physicians and their staff to open discussions and develop protocols that address proper and effective management of victims of domestic abuse. The video is available at a special price of \$128.38 (35% off the regular price) for AMS members. For brochures and ordering information, call 1-800-222-5244. Five percent of the proceeds from sales of the video will go to the AMS Alliance for future health projects.

The video is one of many elements in the alliance's domestic violence statewide health project. In October, which was Domestic Violence Awareness Month, the Alliance co-sponsored *The Clothesline Project*, a visual display honoring and remembering women who have died due to domestic violence. T-shirts, decorated in memory of the victims and often depicting the circumstances surrounding their deaths, were hung on a clothesline for a week-long display at the State Capitol.



The Clothesline Project, a visual display of T-shirts decorated in memory of domestic violence victims and a part of the AMS Alliance's statewide health project, was on exhibit at the State Capitol in October.

AMA Guidelines for Physician Responsibilities in Subacute Care

The following guidelines were recently approved for distribution by the AMA's House of Delegates.

1. Physicians are responsible to their patients for delivery of care in all subacute care settings, 24 hours a

day, 7 days a week.

2. Patients who might benefit from subacute care should be admitted to and discharged under the orders of the physician who is responsible for the continuous medical management needed to meet the patient's needs and safety and maintaining quality of care.

3. Physicians are responsible for coordinating care for their patients with other physicians including medical directors, primary care physicians, and appropriate specialists, to optimize the quality of care in subacute settings.

4. Physicians are responsible for supervision and coordination of the medical care for their patients and providing leadership for all other health care providers in subacute care.

5. Physicians should guide procedures for their patients performed within integrated practices and direct other health care providers, consistent with federal and state regulations.

6. Physicians are responsible for:

A. Fulfilling their roles and identifying the medical skills needed to deliver care in subacute facilities and for creating and developing continuing medical education to meet the special needs of patients in subacute care.

B. Identifying and appropriately utilizing subacute care facilities in their communities.

C. Oversight of physician credentialing in subacute settings.

D. Promoting medical staff organization and by-laws that may be needed to support peer evaluations.

E. Planning care of their patients with acute and chronic conditions in subacute care, as well as pursuing efforts to restore and maintain functions for quality of life.

7. Subacute units and/or programs need physician medical directors to assure quality of medical care, provide peer group liaisons, and coordinate and supervise patients and families input and needs.

8. Physicians provide a plan of care for medically necessary visits after completing an initial assessment with 24 hours of admission that identifies the medical services expected during subacute care.

9. Attending physicians should:

A. Make an on-site visit to review the interdisciplinary care plan within seventy-two hours of admission.

B. Determine the number of medically necessary follow-up visits; these may occur daily but never less often than weekly.

C. Document active involvement of physicians in interdisciplinary care and all major components of the patient care plan including completing a progress note for each patient visit.

10. Physicians should implement these guidelines through organized medical staff by-laws in subacute settings to assure quality patient care.

Transmission of HIV by Transfused Blood

Although the risk of acquiring HIV infection from transfused blood has dropped dramatically during the past decade, a tiny risk remains. Researchers estimated the risk by (1) collecting demographic data from the American Red Cross, (2) calculating the probability that blood is donated during a 25-day "window period" when someone with recently acquired HIV is still seronegative, and (3) assuming that 0.5% of HIV-infected donations are not identified due to lab error.

The model predicts that 1 in 450,000 donations occurs during the "window period," and that 1 in 2,600,000 donations is infectious but not detected because of lab error. However, some of these units are discarded because they test positive for hepatitis or other conditions. The model finally concludes that 18 to 27 of the 12 million annual blood donations in the U.S. are infectious for HIV and available for transfusion.

Comment: The validity of this analysis obviously depends on the accuracy of its assumptions. But at least it provides a starting point for policy makers who are considering strategies to make transfusions even safer. - AS Brett

Lackritz EM; et al. Estimated risk of transmission of the human immunodeficiency virus by screened blood in the United States. N Engl J Med 1995 Dec 28; 333:1721-5.

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State Teen Birth Rate is Up

Arkansas' teen birth rate - the number of births to women 15 through 19, divided by the number of women in that population, times 1,000 - increased in 1994 for the first time since the beginning of the decade, according to birth certificate data. In 1994, each 1,000 females from 15 to 19 years old gave birth to 79.1 babies.

Fortunately, infant deaths during the first 27 days of life fell to 5 per 1,000 births, a five-year low, and the number of pregnant women receiving first-trimester care rose to 75 percent, nine points higher than 1987. The state's induced abortion rate of 18.2 per 100 live births (1990-1994) remains well below the national numbers - 33.5 in 1992.

During the period of 1990-1994, 77.7 out of each 1,000 teenagers in the 15-19 year old age group gave birth. In 1994, Arkansas teens gave birth at a rate of 79.1 per 1,000, up from the 1993 rate of 75.2. The U.S. figure in 1993 was 59.6 per 1,000.

Arkansas' low abortion rate accounts for much of the disparity between the state's teen birth rate and the national average. If all U.S. teens had abortions at the same relatively low rate as Arkansas teens (20.9 induced abortions per 100 live births), the birth rates would be much closer.

1990-94 average teen births per 1,000 females, by county

STATE	77.7	Cross	101.8	Lawrence	73.2	Polk	82.8
Arkansas	82.3	Dallas	81.9	Lee	104.7	Pope	67.7
Ashley	96.9	Desha	101	Lincoln	69.3	Prairie	80.7
Baxter	62.3	Drew	76	Little River	76.1	Pulaski	79.4
Benton	73.6	Faulkner	39.5	Logan	82.8	Randolph	64
Boone	68.4	Franklin	78.9	Lonoke	62.1	St. Fran.	112.3
Bradley	97.3	Fulton	76.2	Madison	73.8	Saline	50.3
Calhoun	68.1	Garland	76	Marion	80.2	Scott	74.1
Carroll	67.1	Grant	57.4	Miller	86.3	Searcy	61.5
Chicot	105	Greene	78.5	Mississippi	113.8	Sebastian	80.8
Clark	49.2	Hemp.	93.6	Monroe	102.6	Sevier	99.1
Clay	77.6	Hot Spring	78.5	Montgom.	60.4	Sharp	69.8
Cleburne	52.9	Howard	73.2	Nevada	71.1	Stone	67.1
Cleveland	52.1	Independ.	65.2	Newton	82.7	Union	94.3
Columbia	78.9	Izard	70	Ouachita	90.5	Van Buren	67.1
Conway	60.7	Jackson	87	Perry	75.9	Wash.	62.6
Craighead	64.5	Jefferson	85.1	Phillips	131.1	White	59.4
Crawford	81.7	Johnson	88.4	Pike	78.8	Woodruff	104.5
Crittenden	107.3	Lafayette	92.2	Poinsett	96.1	Yell	83.3

Black teens gave birth at a rate nearly twice that of white teens in the five-year study - 126.1 births per 1,000 among black teens and 65 for white teens. Phillips County had the highest teen birth rate, 131.1 per 1,000, more than three times higher than in Faulkner County.

Among all Arkansas women of child-bearing age the general birth rate was 67.3 births per 1,000 in 1994. Average birth rates appeared to be the highest in eastern Arkansas. Phillips County had the highest overall rate, 97.4 births per 1,000, while Clark County had the lowest rate, 53.3.

Also among the state's child-bearing population during the five-year period, the birth rate among white women was 63.5 per 1,000, roughly two-thirds the black rate of 89.3. Between 1993 and 1994, the rate increased slightly from 66.4 to 67.3. While the Arkansas rate has closely followed national trends since 1980, U.S. figures showed no corresponding increase in 1994.

Unmarried women had about one-third of the 1994 babies. They accounted for 11,245 of 34,744 births. Between 1990 and 1994, single moms accounted for nearly two-thirds of Phillips County births, but by contrast, 15 percent in Madison County.

In 1994, unmarried Arkansas women aged 15-19 gave birth to 4,306 children. Those babies accounted for 12 percent of all Arkansas births, 38 percent of births to single women, and nearly two-thirds of all births to teenaged mothers. One in four Chicot County births was to an unmarried teen in 1990-1994. In Stone County, only one birth in 25 was to an unmarried teen. Single mothers accounted for 71 percent of births among black Arkansans in those years, much higher than the 19 percent rate among whites. One in five

Arkansas births 15 years ago was to an unmarried mother. Now, it's about one in three, reflecting the national increase.

Infant mortality - death before the first birthday - during 1994 was 9.4 per 1,000 live births, down from a recent high of 10.4, but well above the '93 national average of 7.9. Infant mortality rates varied tremendously by race. Between 1990 and 1994, Arkansas' average rate was 14.9 for blacks and 8.5 for whites. The U.S. has one of the highest infant mortality rates of the industrialized nations.

While Arkansas' prevalence of low-birthweight babies is higher than most

states, the death rate during the first 27 days (neonatal death rate) closely tracks the U.S. average. In 1994, both the Arkansas and the U.S. neonatal death rate were 5 per 1,000 live births. But between the ages of 28 days and one year, Arkansas infants died at a rate higher than the national average. In 1994, that rate was 4.3 per 1,000 live births, compared to the 1994 national average of 3. In large part, that's attributable to the high poverty rate in the state. In fact, mortality among that age group tends to be the highest in the poorest counties.

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Unmarried Arkansans are at least three times more likely to drive drunk

Unmarried Arkansas couples and people who are separated are 4.5 times more likely to drink and drive than those who are married, according to a telephone survey conducted during 1991, 1993 and 1995.

The Behavioral Risk Factor Surveillance Survey also found that never-married persons drive drunk at a rate four times greater than marrieds, and divorced persons are 3.3 times more likely to drive drunk than marrieds.

Males were five times more likely than females to say they sometimes drink and drive, according to the study. Social conventions help account for this: more males drink than females, and males are more likely to drive when both males and females occupy the same vehicle.

Alcohol/Non-Alcohol Related Traffic Casualties					
Year	Total Traffic Deaths	Total Alcohol Related Deaths	Percent of Deaths Alcohol Related	Causalities per Non-Alcoholic Accident	Causalities per Alcohol-Related Accident
1991	608	322	53.0	0.53	.99
1992	588	252	42.9	0.56	1.01
1993	583	206	35.3	0.56	1.02
1994	610	206	33.8	0.57	1.02

Source: Arkansas State Highway and Transportation Department

Arkansas adults younger than 45 were over four times more likely to drink and drive than their elders. Persons with some college education were more than twice as likely to report drinking and driving than those with a high school education or less.

Those who lived in wet counties reported drinking and driving at 1.7 times the reported rate of those living in so-called dry counties, and rural residents reportedly drank and drove at nearly twice the rate of their urban counterparts.

The data also support the conventional wisdom

drunk driving prevalence was only half.

People looking for work also reported a high driving and drinking prevalence. Among those working, 2.4 percent said that they drank and drove during the previous month. Among those seeking work, the drinking/driving prevalence was 3.9 percent, while among those said they were not looking for work, it was only 0.9 percent.

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ARKANSAS MEDICAID

Fact Sheet

PROGRAM COSTS

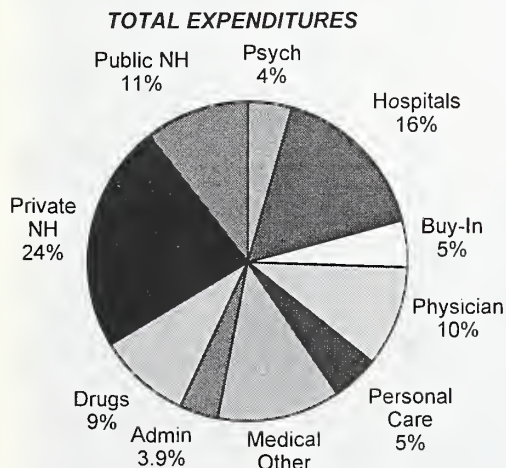
SFY	Total (in mill)	Unduplicated Recipients	Average Cost
1991	\$705	299,057	\$2,357
1992	\$910	311,015	\$2,926
1993	\$1,027	341,786	\$3,005
1994	\$1,092	342,264	\$3,191
1995	\$1,204	349,072	\$3,449
1996 (Approp)	\$1,300	356,053	\$3,651
1997 (Approp)	\$1,429	363,175	\$3,935
1998 (Proj)	\$1,549	370,438	\$4,182
1999 (Proj)	\$1,679	377,847	\$4,444
2000 (Proj)	\$1,819	385,404	\$4,720

		Medicaid
Arkansas Medical Economy	\$7.5 billion	17.3%
State of Arkansas Budget	\$9.7 billion	13.4%
State Gen Revenue Budget (includes Trust Fund)	\$3.1 billion	12.6%

		Medicaid Serves
Arkansas Population	2,350,725	16%
Arkansas Elderly	350,058	20%
Arkansas Children	731,010	27%

Factoid: 16,000,000 claims processed annually

Expend



**It's a FACT: Medicaid has over
7,000 Participating Providers**

Medicaid Eligibility:

1. AFDC - Parents & Children
2. Children to 12 yrs - 100% poverty
3. SOBRA - Pregnant Women and Children to 6 yrs - 133% poverty
4. SSI - Aged, Blind, Disabled
5. Medically Needy
6. Qualified Medicare Beneficiaries

Ages of Eligibles SFY95			
	Eligibles (thou)	Expend (\$ mill)	Avg Per Elig
Under 1	17	\$54	\$3,278,788
1-5 yrs	73,480	\$108	\$1,471
6-14 yrs	73,033	\$107	\$1,469
15-20 yrs	34,482	\$94	\$2,714
21-44 yrs	75,822	\$230	\$3,033
45-64 yrs	32,161	\$145	\$4,493
65-75 yrs	24,558	\$85	\$3,465
75-84 yrs	25,316	\$142	\$5,617
85 & over	18,253	\$163	\$8,914
Total	357,122	\$1,128	\$3,157

Fact: 46% of all babies born in Arkansas are paid for by Medicaid

Arkansas Medicaid Covered Services: Ambulatory Surgical Center, Early and Periodic Screening, Diagnosis and Treatment (EPSDT), Developmental Day Treatment Clinic Services (DDTCS), Dev Disability Community Based Services, Domiciliary Care, Durable Medical Equipment, Elder Choices Services, Emergency Services, Family Planning Services, Federally Qualified Health Center, Home Health Care, Hospice, Inpatient Hospital Services, Outpatient Hospital Services, Hyperalimentation Services, Injections, Laboratory & X-Ray, Nursing Home Care, Nurse Midwife Services, Nurse Practitioner, Organ Transplants, Personal Care Services, Physician Services, Podiatrist Services, Prescription Drugs, Private Duty Nursing Services, Prosthetics, Rehabilitative Hospital Services, Rural Health Clinic Services, Rehabilitative Services For Persons with Mental Illness, Targeted Case Management, Transportation, Ventilator Equipment, Vision Care Services For Children under 21 only: Chiropractic Services, Dental Services, Hearing Services, Inpatient Psychiatric & Psychology Services, Therapy Services

INITIATIVES

Primary Care Case Management Waiver

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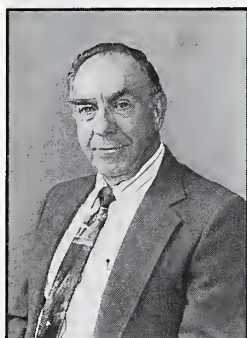
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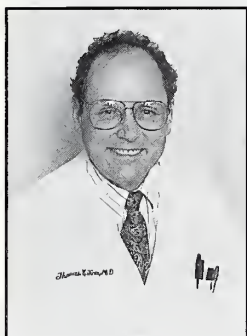
AMS Newsmakers

Dr. Stanley Applegate, a Springdale physician, was honored recently for his golden anniversary - marking 50 years in medicine.



Robert L. Baker, M.D.

Dr. Robert L. Baker, medical director of Hospice of the Ozarks and Baxter County Regional Hospital Home Health, has been awarded a certificate as a founding member of the International College of Hospice/Palliative Care by the International Hospice Institute.



Thomas E. Knox, M.D.

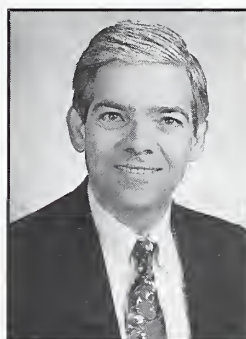
Dr. Thomas E. Knox, a Mountain Home orthopaedic surgeon, recently participated in the 14th annual meeting of the Arthroscopy Association of North America in San Francisco, California. The meeting informed surgeons of recent developments in the changing field by means of scientific paper presentations and instructional courses.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of January 1996 are:

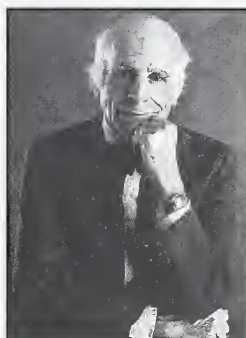
Joseph Kimball Buchman	Little Rock
George Krueger Covert	Texarkana
James M. Eaton	Benton
Demetrio M. Hechanova	Hot Springs Nat'l Park
Fred Oswald Henker	Little Rock
William T. Huskison	Fort Smith
Thomas Roland Koehler	Little Rock
Jean M. Rickey	Russellville
David Henry Roberts	Mountain Home
Alan Robert Storeygard	Jacksonville
Paul Edward Wylie	Little Rock
Michael Clarence Young	Prescott

Dr. Michael Moody has been named to serve as Medical Director of The Arkansas Foundation for Medical Care (AFMC) with **Dr. Tom Tinsman** serving as Associate Medical Director. Dr. Moody will work in a part-time capacity at the AFMC Little Rock office while maintaining his private practice in Salem. Dr. Tinsman will serve on a part-time basis at the Fort Smith AFMC office while he continues his Fort Smith practice.



Jeffrey L. Tate, M.D.

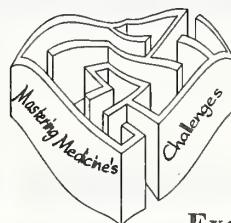
Dr. Jeffrey L. Tate, a Rogers psychiatrist, has been named chair of QualChoice Mental Health Advisory Committee. The committee will work to improve the mental health benefits of QualChoice, the statewide health insurance program for Arkansas state university and government employees.



Eugene J. Towbin, M.D.

Dr. Eugene J. Towbin, chief of staff at the John L. McClellan Memorial Veterans Hospital, has been named recipient of the Arkansas Hospital Association's 1995 Distinguished Service Award, which is presented to those who have promoted the health-care industry in the state of Arkansas.

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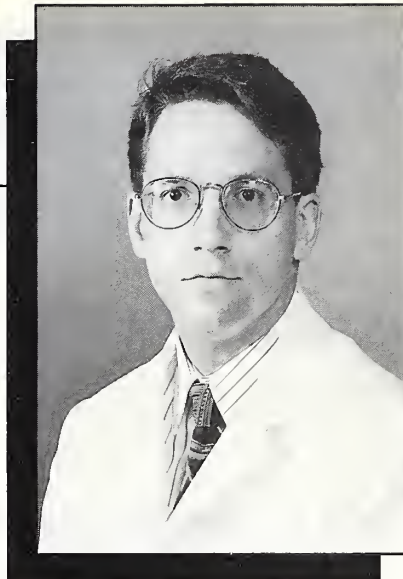
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New Member Profile



John M. Allen, M.D.

PROFESSIONAL INFORMATION

Specialty: Urology

Years in Practice: Less than one year

Office: Jonesboro

Medical School: Nebraska Wesleyan University, Lincoln, NE, 1985

Internship: University of Nebraska College of Medicine, 1989

Residency: Louisiana State University/Ochsner Urology Residency, 1995

Business and other affiliates: Northeast Arkansas Fly Fishermans Association, Arkansas Foundation for Medical Care, Arkansas Urological Society, American Medical Association and American Urological Association

PERSONAL INFORMATION

Wife: Caryn

Children: Son, Mason

Date/Place of Birth: March 7, 1963 - Omaha, NE

Hobbies: Golf, fishing, biking, camping and coin collecting

THOUGHTS

If I had a different job, I'd be: An electrical engineer

Historical figure I most identify with: Albert Schweitzer

Worst Habit: Procrastination at home

Best Habit: Perfectionist at work

Favorite junk food: Chocolate

Behind my back, they say: I'm too serious

People who knew me in medical school, thought I was: Easy going

Most valued material possessions: Coin Collection

The turning point of my life was when: I decided to enter medicine

Favorite vacation spot: Colorado

One goal I haven't yet achieved: Family of four children

One goal I am proud to have reached: Marriage and family of one child

Favorite childhood memory: Vacationing with my parents

When I was a child, I wanted to grow up to be: A forest ranger

One of my pet peeves: A messy desk and house

First job: Paper route

One word to sum me up: Happy

My life philosophy: Do something every day for one's mind, body and spirit (i.e. read, exercise, pray)

If you are interested in appearing in either the *New Member Profile* or *Member Profile*, contact Tina Wade at the Arkansas Medical Society at (501) 224-8967 or 1-800-542-1058.

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Old-Fashioned Soda Fountain Stirs Up Memories at Pine Bluff's Band Museum

Sheila Yount*

Jerry Horne has a lot of memories of his days as a soda jerk at a Camden drugstore and, lately, he's been reliving them.

"I'm having more fun than anybody, reliving my youth," the 63-year-old Horne says as he works to create yet another "perfect" chocolate ice cream soda. "Half the fun is stirring it to your own satisfaction - and it has to be pretty also. It can't be messy and spill over the side."

He's making the soda in his newly-opened soda fountain located at the rear of the Band Museum at 423 Main St. in Pine Bluff. Horne, who owns Wallick Music Co. located near the museum, says he spends a lot of time these days at the fountain, which he opened in October 1995, nearly a year after the museum opened. In fact, he works at the fountain for at least a short while each day that it is open. And he has trained the other soda jerks, or "fizziologists" as he calls them, who work here.

"It's exciting for me to come in and see who is here and what they've ordered," he says as he places a cherry on top of the soda and admires the finished product.

One might wonder what a soda fountain is doing in a museum dedicated to preserving antique band instruments, but the answer is simple. Not only does Horne have a penchant for soda fountains, but the city's first soda fountain was located in the building that now houses the museum. The original fountain opened in about 1895 in what was then Hart's Drugstore.

In keeping with the history of the building, Horne originally wanted to re-create an 1890s-era fountain. But after he discovered that the original fountain didn't have carbonated water, he decided to re-create a 1950s-era fountain instead.

"I prepared a menu that has 99 percent of anything that you could buy in 1940 or '50," he says. "I've got a full menu of everything. I can make about ten different kinds of sundaes and malts, banana splits

and all of the standard drinks, including a cherry phosphate, that you could get in those days."

At the grand opening of the soda fountain, Horne instituted 1950s prices just for the day and he figured he might draw a crowd of about 150 to 200 people. Much to his surprise, more than 600 people crowded into the museum to indulge in cokes for 10 cents, milkshakes for 20 cents and banana splits for 50 cents.

"We went through 22 gallons of ice cream, nearly 50 pounds of bananas and we sent out for more supplies four times because we just ran out," Horne says.

Horne didn't have any trouble recalling how to make those banana splits and cherry phosphates.

"I remembered about 90 percent of it and some of it I just had to experiment with until I got it right," he says.

Horne has found that he is stirring up a lot of the townspeople's memories along with his decadent concoctions.

"Everyone who comes in over the age of 50 has a story to tell about some soda fountain and they really know these drinks," he says. "I have to kind of describe them to the youngsters."

By describing the items to the young people, he is hoping to further pique their interest in the fountain. In fact, he says he would like to re-establish the soda fountain as a place for teenagers to hang out, just as they did in Horne's youth. He notes that he has trained two high school students who are working as volunteer soda jerks.

"By the late '40s, every drugstore had a soda fountain. It wouldn't be a drugstore without a soda fountain and it was the social center for the teenager," he recalls. "They would come in and buy a cherry phosphate for a nickel and listen for two hours to the jukebox and visit with their friends."

To encourage teenagers to discover the soda fountain, Horne is giving away discounted tickets to local students.

Horne created the fountain in a back room of the museum that had previously been a "junk room," he says. He furnished it with a striking antique oak back

* Sheila Yount is a travel writer with the Arkansas Department of Parks and Tourism.

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bar and had the front portion of the bar built. A festive black and white checkered floor was put in and antique coke signs hang on an exposed brick wall, adding a nostalgic touch. A large picture of the original soda fountain at Hart's Drugstore hangs next to the bar. And a jukebox filled with songs from the 50s and 60s sits in the corner ready to transport customers back in time with a song from Elvis or Chubby Checker.

Horne says he welcomes groups. With appointments, he will provide groups with guided tours of the museum, catered meals and, of course, desserts from the soda fountain.

Visitors who stop in for a banana split or a soda, should also take time to tour the museum. The museum features instruments from Horne's collection of more than 700 instruments, some of which date to the 1700s.

The museum and fountain are open from 10 a.m. to 4 p.m., Tuesday through Saturday. For more information, contact Horne at the Band Museum, 423 Main Street, Pine Bluff, Arkansas, (501) 534-HORN. ■



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Antiretroviral Therapy 1996

Joseph M. Beck II, M.D.*

The last several years have brought new insights and understanding into the ongoing dynamic of HIV infection. Powerful new tools such as quantitative polymerase chain reaction (PCR) of viral particles per milliliter of blood have allowed first researchers, then practicing physicians to observe the short- and long-term effects of antiretroviral therapy with increasing accuracy.

HIV infection in humans is an ever-evolving, dynamic process. From earliest infection, the virus disseminates widely to all tissues, including the central nervous system, and maintains itself in the reservoir of the germinal centers of peripheral lymph nodes. Within a few weeks of initial infection, 3×10^{10} HIV particles are produced. This number approximates the number produced over the next 4-5 years. There is an ongoing partially effective immune response, with 30% of the viral population turning over and several hundred million CD4 cells replaced daily.

In addition, the virus "swarm" moves evolutionarily toward more resistant, more cytopathic, more syncytium forming with each passing day. As the end of the natural history of infection approaches, the infected host possesses virus that is genotypically and phenotypically quite different and more virulent than the initial infecting viral swarm.

Zidovudine was the first antiretroviral released (1987) and for many years was used as monotherapy. It remains a mainstay of therapy, due to its penetration in the CSF and its excellent safety profile at current doses. In a recent population study conducted in London by Torsten Baldeweg, as the number of people

taking ZDV fell from 1,000 to 400 from 1991 to 1994, the incidence of dementia increased from 2 percent to 7 percent. ZDV should be included if possible in any combination for neurological reasons.

Following zidovudine, beginning in 1991 the "d" drugs were released, ddI and ddC. These drugs have essentially the same mechanism of action as ZDV (reverse transcriptase inhibitors) but have non-overlapping toxicities, including peripheral neuropathy and pancreatitis.

D4T (stavudine) was released in 1994 and is useful in combination therapy. The main toxicity here is also peripheral neuropathy but it is more convenient with a BID dosage.

Late 1995 brought two new drugs in rapid succession. The first, released in late November 1995, was lamivudine or 3TC, the 5th drug in succession in the

CURRENTLY AVAILABLE ANTIRETROVIRAL AGENTS

1. Zidovudine (AZT, ZDV) Retrovir	100mg tablets 3-10/day
2. Didanosine (ddI) Videx	250mg chewable tablets one BID
3. Dideoxycytidine (ddC) Hivid	0.375 and 0.75mg tablets TID
4. Stavudine (D4T) Zerit	15, 20 and 40mg tablets BID
5. Lamivudine (3TC) EpiVir	150mg tablets, one BID
6. Saquinavir Inverase	200mg tablets 3 tabs TID

reverse transcriptase class. In December 1995, a major breakthrough occurred with the release of saquinavir (Inverase). This drug marks the first protease inhibitor released for the treatment of HIV in combination with a reverse transcriptase inhibitor. This drug is poorly bioavailable, with only about 4% of an oral dose reaching the circulation, but even so is quite potent, with the decreases in viral load of 1-2 logs quite common. A more bioavailable formulation is under development. Mutations occur less frequently than with

* Dr. Beck is a Little Rock Oncologist and Chairman of the Arkansas Medical Society AIDS Committee.

POTENTIAL INTERACTIONS

Stavudine (D4T) significantly inhibited phosphorylation of AZT in peripheral blood mononuclear cells. In vivo significance is unclear.

3TC markedly inhibits phosphorylation of ddC in PBMC's.

Use of the above combinations is theoretically contraindicated.

other drugs, at codons 90 and 40 in the reverse transcriptase molecule.

Recommendations for Therapy

Combination therapy is the platinum standard for the management of HIV infection for people with access to the growing armamentarium of drugs. A consensus on which combinations and in what dosages has not yet been reached. Many HIV physicians follow a hypertension mode of antiretroviral therapy in

which treatment is initiated with one drug and then after resistance appears, either the drug is replaced or another drug is added. We know that resistance can develop frightfully quickly, in 2-3 weeks to some agents.

Other physicians follow an oncology model and start patients on a multidrug regimen of two or three drugs to maximize synergy of the agents. Below are the currently available antiretroviral agents with some potential interactions. Most AIDS physicians would recommend a protease inhibitor, AZT plus one other agent. My own practice is to ask the patient to take the AZT daily and then to alternate the other two drugs daily or weekly.

Clinical trials are underway to try to elucidate the best combination; however, due to lack of clear endpoints and the activism of many participants of clinical trials, results may be difficult to interpret. With the indicators of viral load so available, a fall in CD4 count, opportunistic infections or death are no longer acceptable clinical endpoints.

On the horizon, spring 1996 perhaps, will be the availability of one or more additional protease inhibitors to add to our armamentarium. ■



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James B. Gibson, M.D., Ph.D.**

Introduction

As the new year begins, newborns in Arkansas are now being routinely screened for galactosemia. Act 113 of 1995 mandated the addition of this disorder to the newborn screening profile. Because it is uncommon, many physicians are unfamiliar with galactosemia. In this article we review the common forms of galactosemia, discuss the rationale for newborn screening and the methodology being used here and describe follow-up procedures.

Clinical Characteristics

The term galactosemia encompasses three distinct defects in galactose metabolism (see figure). The one first described involves a complete deficiency of galactose-1-phosphate uridylyltransferase (GALT), and is commonly referred to as "classical" galactosemia. This autosomal recessive disorder has an incidence of about 1:40,000.¹ GALT catalyzes the exchange of galactose-1-phosphate (gal-1-P) for the glucose-1-phosphate in uridine diphosphate glucose (UDPG) to form uridine diphosphate galactose (UDPGal). In the absence of the transferase enzyme, galactose accumulates in blood and urine while gal-1-P builds up in erythrocytes and other cells. Most authorities believe that significant complications of the disease are due to toxic effects of these and other metabolites.

Early signs and symptoms of classical galactosemia include jaundice, hepatomegaly, hemolytic anemia, ascites, diarrhea and failure to thrive. The most urgent threat to the neonate is bacterial sepsis, most commonly due to *Escherichia coli*. One study estimated that up to 30% of untreated galactosemics die from bacterial sepsis.² Among surviving infants who remain untreated, early cataract formation, mental retardation, and cirrhosis almost inevitably ensue.

Several variants of GALT which result in *partial* enzyme activity have also been reported. In some cases these variants are associated with clinical effects similar to those of classical galactosemia. The so-called Negro variant, first reported in 1962, appears commonly among blacks diagnosed with galactosemia.³ In this variant there is no detectable erythrocyte GALT activity, but there is a small amount (~10%) of enzyme activity in the liver. Other clinically significant variants of GALT include Rennes, Indiana and Chicago I.

Variants of GALT not believed to be clinically significant in homozygous form include Duarte, Los Angeles, Berne, and Chicago II. The Duarte variant in its homozygous form exhibits about 50% of normal GALT activity. However, the Duarte-classic galactosemia compound heterozygote (DG) phenotype exhibits only about 20-25% normal activity and is associated with significant elevations of erythrocyte gal-1-P in infants. Most treatment centers elect to place such infants on lactose-free formula for the first six to twelve months, followed by milk challenge. Because of the relatively high frequency of the Duarte variant gene,³ it is likely that three to five infants with the DG combination are born in Arkansas each year.

A second major form of galactosemia is due to deficiency of galactokinase. This enzyme catalyzes the phosphorylation of galactose to form gal-1-P. In galactokinase-deficient individuals, galactose accumulates in blood and urine while galactitol accumulates in ocular lenses. There is no abnormal accumulation of galactose-1-phosphate. Therefore, the chief clinical finding is early cataract formation, often within the first weeks of life. Galactokinase deficiency is believed to occur in about 1 in 40,000 individuals.⁴

The third enzyme defect associated with galactosemia is that of UDPGal-4'-epimerase, which catalyzes the reversible transformation of UDPGal to UDPG. Two subtypes of epimerase deficiency have now been described. In the "peripheral" form, epimerase is deficient in erythrocytes and leukocytes but

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present in liver, skin and other tissues. Although elevated concentrations of gal-1-P are found in the blood of these individuals, there are no significant clinical effects. On the other hand, the rare "generalized" form of epimerase deficiency results in clinical features indistinguishable from those of classic galactosemia. In this subtype epimerase activity is less than 10% of normal in blood cells, fibroblasts, and other body tissues.

Treatment and its Consequences

The mainstay of therapy for classic galactosemia, galactokinase deficiency, and generalized epimerase deficiency is a lactose-free diet. Lactose is a disaccharide composed of glucose and galactose. While small amounts of galactose are obtained from other animal and plant foods, the lactose found in human, bovine and other mammalian milks is by far the most significant source of dietary galactose. However, galactose is not considered an essential nutrient because of the reversible epimerase reaction that is capable of producing galactose-containing compounds.

Early institution of a lactose-free diet has proven beneficial in reversing the acute neonatal symptoms and in preventing many of the sequelae of galactosemia including severe mental retardation, irreversible cataracts, and liver disease. Despite dietary therapy, erythrocyte galactose-1-phosphate concentrations and urinary galactitol remain higher than in a normal population. It has been observed that many adults and older

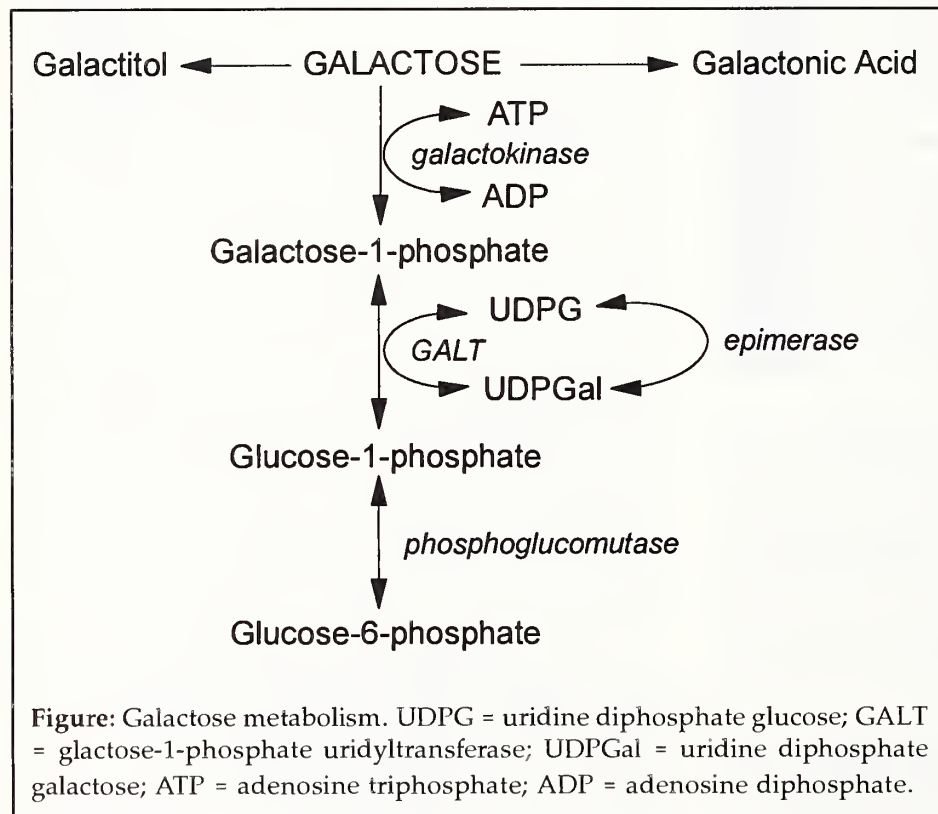
adolescents with classic galactosemia can tolerate modest amounts of lactose-containing foods without catastrophic consequences but with some gastrointestinal symptoms; often these individuals liberalize their diets themselves. This apparent "improved" tolerance over time is not due to induction of functional GALT but is most likely due to the fact that lactose accounts for a much smaller percentage of the total caloric intake in the average adult (3-4% or less) as opposed to the young infant (40%).⁵ Although most such adults have not exhibited overt worsening of clinical findings, the question of whether relaxation of the diet leads to significant diet-dependent long-term effects is still open for study.

Long-term Complications Despite Treatment

Recent concerns have focused on long-term outcomes of patients who presumably were adequately treated throughout childhood. In particular, a large percentage of women treated by lactose-free diets for classic galactosemia have been found to have hypergonadotropic hypogonadism associated with amenorrhea, infertility, and premature menopause.⁶ The most plausible explanation for this phenomenon appears to be prenatal (and possibly postnatal) damage to the developing ovary caused by galactose, gal-1-P, or other toxic metabolites, leading to significant

reduction in oocyte numbers. Interestingly, testicular dysfunction among affected males is rare.

Other concerns have centered on neurodevelopmental outcomes of treated galactosemics. IQ testing of older children and adults in some series have shown somewhat disappointing results (mean IQ's of 85 to 95),⁷ although clearly the test scores are higher than those found among untreated patients. More sophisticated testing has revealed a relative preponderance of visual-perceptual defects among older patients, along with a high incidence of speech disorders.^{7,8} The pathogenesis of these deficits remains elusive, but as with ovarian failure may involve prenatal effects. Rare cases of severe developmental delay, tremor, hypoto-



<u>Galactose (mg/dL)</u>	<u>GALT (U/gHb)</u>	<u>Specimen Integrity</u>	<u>Interpretation</u>	<u>Action</u>
<9	>3.5	—	Presumed normal	None
<9	≤3.5	Unacceptable	Inconclusive	Filter paper repeat
9 - 15	>3.5	—	Partial positive	Filter paper repeat; lactose-free formula
9 - 15	≤3.5	Unacceptable	Partial positive	Filter paper repeat; lactose-free formula
Any	≤3.5	Acceptable	Positive screen	Whole blood and urine; lactose-free formula
>15	Any	Either	Positive screen	Whole blood and urine; lactose-free formula

Table - Interpretation and follow-up for galactosemia screening result combinations. *Adjustments in cut-off values may be necessary as dictated by the screening method.*

nia, and movement disorders have also been reported among galactosemics adequately treated according to the usual biochemical standards.⁹ These observations have led some to speculate that the genetic basis for classical galactosemia is more complex than was initially thought.

Newborn Screening

Despite the above concerns, newborn screening for galactosemia is still widely endorsed by metabolic and public health experts. Even though some late sequelae have not been prevented, the severe consequences of untreated galactosemia (mental retardation, cataracts, cirrhosis) are now only rarely seen among patients treated early. The severity of the chronic complications that are seen may also be reduced through early detection and treatment. Perhaps most importantly, however, early identification through newborn screening allows prevention of death from bacterial sepsis, which as stated earlier kills 30% of untreated infants by the second week of life. Neonatal screening also detects the relatively common cases of DG compound heterozygotes.

The argument that newborn screening is unnecessary because cases will be detected clinically has been disproved through three decades of screening in other states and countries. Not all affected infants show obvious signs of illness, and in those who do the diagnosis is often missed. In Arkansas, only one case of galactosemia is currently followed by the Genetics staff at Arkansas Children's Hospital. While some cases in border communities have probably been detected clinically and referred to metabolic centers in surrounding states, it is safe to infer that some cases have been missed in the past 25 years.

The relative rarity of the disorder has also been used as an argument against universal screening. However, this can be countered somewhat by the low cost of screening per test, particularly when incorporated into a pre-existing program. As long as the cost per

test remains low, the costs of detecting one case of the disease will be more than offset by savings in acute and long-term care expenses of a disabled individual.

The screening methodology used in Arkansas involves quantitative measurement of both total galactose and GALT using a highly automated fluorometric system developed by Isolab, Inc. Measurement of galactose on every baby helps confirm abnormal GALT values and also allows for detection of galactokinase and epimerase deficiencies. Routine measurement of GALT ensures that no cases of classic galactosemia are missed due to false-normal values of galactose. The latter might occur if an affected infant has insufficient galactose intake prior to screening due to NPO status, placement on a lactose-free formula at birth, or very early discharge.

One of the pitfalls of universal GALT screening is the frequency of false-positive results. This is caused by enzyme denaturation during transport and is particularly prevalent under hot, humid conditions. To help assuage this problem, all specimens testing low for GALT also undergo a specimen integrity assay (SIA). This is simply an additional assay for the enzymes phosphoglucomutase (PGM), glucose-6-phosphate dehydrogenase (G-6-PD), and 6-phosphogluconic dehydrogenase (6-PGD). If these enzymes also test low, it is likely that the specimen has deteriorated during transport.

Possible screening result combinations, their interpretation, and recommended follow-up actions are summarized in the table. A level of total galactose < 9 mg/dL combined with a GALT value of > 3.5 units per gram of hemoglobin (U/gHb) constitutes a negative result and is reported out as "normal galactosemia screen." A normal total galactose together with an abnormal (≤ 3.5 U/gHb) GALT value having an "unacceptable" specimen integrity assay is reported as "inconclusive." In most cases this pattern means only that the specimen enzymes have denatured and hence disease is unlikely, but a filter paper repeat should be

obtained.

Values of galactose between 9 and 15 with either normal or inconclusive GALT readings are classified as "partial positives." While classic galactosemia is unlikely in this circumstance, these results could indicate galactokinase or epimerase deficiency. Institution of lactose-free formula is recommended pending results of immediate filter paper assay. Acceptable lactose-free formulas include the widely available soy-based and casein-hydrolysate preparations. While at one point there was concern over galactose-containing oligosaccharides present in soy formula, available evidence suggests that these are not appreciably digested by humans.

"Positive" results include any galactose value over 15 mg/dL regardless of GALT and SIA, and any GALT value ≤ 3.5 U/gHb with "acceptable" specimen integrity regardless of total galactose. Swift follow-up action is imperative for infants having results in either category. The baby should be examined immediately for clinical features of the disease or signs of early sepsis. Lactose-free formula must also be instituted immediately, and whole blood and urine obtained for confirmatory testing (i.e. erythrocyte GALT and gal-1-P, urinary galactose and galactitol). Confirmatory testing is available at Arkansas Children's Hospital. Specialists in genetics and metabolism are also available at ACH for consultation on follow-up management of abnormal screening results.

Because of the urgency, primary care physicians are notified by phone and letter of any positive or partial positive results. As always, hospitals receive a printed copy of all newborn screening results. A report showing an "inconclusive" galactosemia result asks the submitter to send in another filter paper specimen. The physician is also sent a letter on inconclusive results to help ensure the repeat specimen is collected.

Conclusion

Successful screening for galactosemia can be accomplished only through a coordinated effort among hospital staff, primary care physicians, the Health Department, and tertiary care providers. The short time frame involved makes it essential that specimens be submitted promptly to the Public Health Laboratories, that turnaround time there be minimal, and the posi-

tive specimens be responded to immediately. Failure in any aspect of the system could result in an otherwise preventable infant death or unnecessary morbidity.

Looking at the future, it is highly possible that adjustments in cut-off values will be necessary as experience with this methodology for galactosemia screening proceeds. The same lab system is now being utilized for phenylketonuria screening and will eventually perform newborn hypothyroidism screening as well. Several other screening assays for genetic/metabolic disorders have already been developed by Isolab for this system, opening new avenues for potentially cost-beneficial additions to the newborn screening profile. Just as with galactosemia screening, however, each potential new screen must be considered individually to assure that it satisfies the usual justifying criteria for mass screening.

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Physician-to-Physician Communication

J. Kelley Avery, M.D.*

Case Report

A 46-year-old woman with an eight-year history of ulcerative colitis under good control on conservative therapy had considered hysterectomy because of the presence of uterine fibroids and excessive bleeding. On at least one occasion the patient had been scheduled for the operation but had decided to wait for a while to see if symptoms would subside. During these examinations there had been no mention of breast abnormalities. Two years earlier, a screening mammogram in an examination by her regular physician, a board certified Ob/Gyn, had recorded, "Breasts normal." One month before reporting for this examination, there was no mention of the breasts on a visit to this same physician.

She went to have the screening examination, asking that the report be sent to her regular Ob/Gyn. She reported having a predominant mass in the upper outer quadrant of the right breast. She was given the screening examination although the policy of this specialty service stated that women who were symptomatic would be given the regular diagnostic mammogram. She got two views of each breast showing two "cysts" corresponding to the "mass" which she had discovered and because of which she had come for the examination. The examination was done by a technician and read by the radiologist before he left for the day. Although the policy of the department called for an examination by the radiologist (at his discretion), her breasts were not examined. The report was, "benign cysts right breast - return for repeat examination in one year."

This patient was also being followed by the "Bone Center" because of recent laboratory findings suggesting calcium loss. Two months after the screening mammography she was seen at the Bone Center, where the note was made that the patient "has developed cysts in the right breast and is being followed by her

regular physician." Again, six weeks later, she was seen by the Bone Center where CT scan was done for bone densitometry.

It was six months after the screening mammography before she was seen by her regular physician. His examination revealed the "lump in the breast - cystic mastitis." Again, she was scheduled for TAH to be done about a month later. She called in stating that she wanted an abdominal ultrasound prior to surgery and would like to delay the surgery for about a month.

The ultrasound revealed the "multiple discrete fibroids, five in number." She did not report for the TAH but went to another Ob/Gyn for evaluation of the breast lesion. This physician confirmed the presence of the fibroids, but because of the mass which had replaced about one half the breast, a mammogram was ordered and a surgeon consulted. The surgeon noted a firm 8-cm mass, some nipple retraction, and no axillary nodes. The mammogram revealed a significant change in the lesion, suggesting malignancy.

At operation, frozen section revealed malignancy confirmed by permanent sections after a modified radical mastectomy. Seven of 15 nodes were positive, and the chest x-ray showed multiple nodules, which proved to be metastases. With both radiation and chemotherapy, the patient survived only a year.

A lawsuit was filed charging both the regular Ob/Gyn and the radiologist with negligence in the delay in diagnosis, failure to advise that the mammogram was not diagnostic, and the failure to recommend more frequent follow-up examinations. A large settlement was necessary, as successful defense of this suit was not believed to be possible.

Loss Prevention Comments

This case is troublesome on its face. How could good physicians become distracted and fail to communicate with each other, so that errors like this are prevented? How could good physicians fail to communicate with their patients so that more effective care

* Dr. Avery is chairman of the Loss Prevention Committee, State Volunteer Mutual Insurance Co., Brentwood, TN. This article appeared in the *Journal of the Tennessee Medical Association* in November 1994. It is reprinted here with permission.

can be given? It happens a lot!

The radiologist in this case certainly called this screening mammogram in such a manner as to raise a question as to his competence. Retrospective examination of the films would not have determined that the only possible diagnosis was benign cysts. Was he in a hurry that day? The technician did the examination, and although it was a "screening" test, proceeded to do the ultrasound examination that protocol indicated was to follow the diagnostic mammogram at the discretion of the radiologist. Again, protocol would have suggested an examination of the breast in this instance, but one was not done. The radiologist should have suggested a follow-up examination sooner than a year, and the regular physician should have examined his patient regardless of the radiologist's recommendation. He saw his patient six months after the mammography with only the comment, "breast lump - cystic mastitis."

Perhaps the regular physician was distracted by

the repeated consideration of a TAH for her uterine fibroids. If the Ob/Gyn specialist was not going to follow the patient more closely, he should have consulted a surgeon to assume the responsibility of definitive treatment of this presenting complaint. Many non-surgeons would have aspirated these "cysts" after the mammogram and followed closely the results of this procedure. Although all patients present unique situations, the non-surgeon should have a protocol, in his head at least, as to the step-by-step management of breast problems.

In the office of both the radiologist and the Ob/Gyn, systems should be in place so that medical assistants could ensure the appropriate follow-up in cases of this type. This kind of scrutiny is certainly in the best interest of our patients, and no less is expected of us by the public at large. Laxity of this degree in the protection of our patients is not tolerable when bad results occur. We pay dearly, both emotionally and financially! ■





DICROTISM: EXAMPLES AND REVIEW OF THE DICROTIC PULSE

Introduction

Dicrotism is a condition associated with the presence of a dicrotic pulse. This pulse wave contour has two upstrokes, one in systole and another in diastole. Occasionally, three distinct waves have been recorded, a condition referred to as a "tricrotic pulse." Recently, a dicrotic and tricrotic pulse has been recorded in two patients in our cardiac catheterization laboratory and has provided the stimulus for this review.

Patient 1

A 45-year-old male was admitted with prolonged chest discomfort, congestive heart failure, and was found to have a non-Q wave myocardial infarction. At cardiac catheterization, a prominent dicrotic pulse was recorded (Figure 1), the left ventricular and diastolic pressure was 27 mm Hg, and the calculated left ventricular ejection fraction at 13%. There was total occlusion of the distal right coronary artery with anatomically insignificant lesions in the left coronary artery. Medical management and consideration for cardiac transplantation was recommended. The etiology of the dilated cardiomyopathy was a combination of myocardial necrosis and other unknown causes.

Patient 2

A 32-year-old male was admitted with symptoms and signs of congestive heart failure. Risk factors for premature coronary atherosclerotic heart disease was only male gender. At cardiac catheterization, a tricrotic pulse was identified (Figure 2), the left ventricular and diastolic pressure was 30 mm Hg, and the calculated ejection fraction less than 10%. The coronary arteries

were free of anatomical significant disease. Medical management and consideration for cardiac transplantation was recommended.

Discussion

Terminology - A pulse wave contour with two prominent upstrokes is known as a *dicrotic* or *bisferens* pulse, reflecting the etymology of the words. "Dicrotic" has its roots in Greek, and "bisferens" in Latin, both literally mean "twice beating."¹ Time has amplified this original meaning to now include a connotation regarding the timing of these waves. Bisferens now means both waves occurring in systole and dicrotic pulse has a wave in systole and diastole. The wave in diastole is also known as the diastolic, dicrotic or percussion wave.

Pathophysiology - A dicrotic wave depends on two

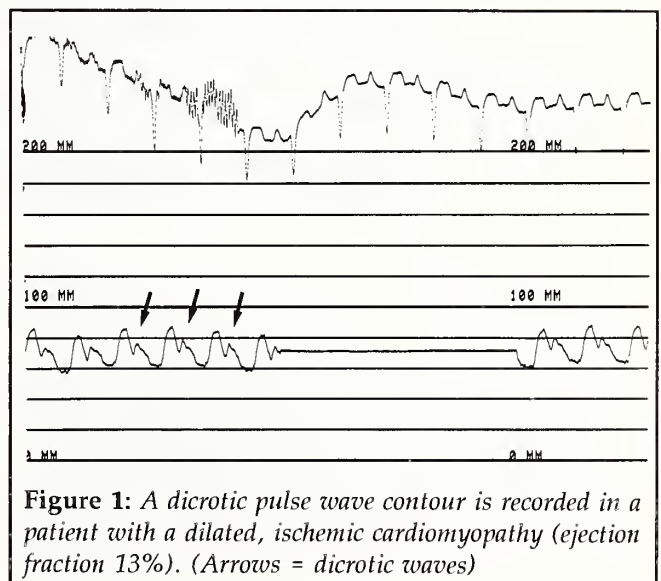


Figure 1: A dicrotic pulse wave contour is recorded in a patient with a dilated, ischemic cardiomyopathy (ejection fraction 13%). (Arrows = dicrotic waves)

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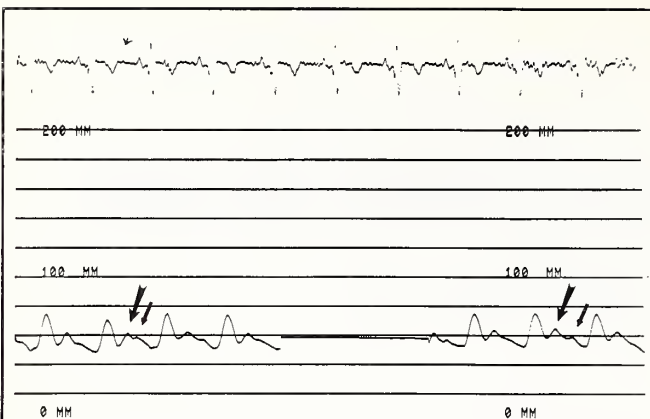


Figure 2: A "tricrotic" pulse wave contour, with two separate waves in diastole (long and short arrows), recorded in a patient with a dilated cardiomyopathy and an ejection fraction < 10%.

features. First, a disproportionate presence in young patients suggests that it depends on an elastic peripheral vasculature.² Secondly, a competent aortic value is critical. A dicrotic pulse has been noted to disappear with the development of a periprosthetic valvular leak.^{3,4}

The description of a dicrotic wave awaited the invention of the sphygmograph in the mid 19th century. Since that time, it has been commonly associated with a low cardiac output state. It has, however, been noted in normal young patients, and other conditions including pericardial tamponade, constrictive pericarditis, tachycardia, and primary pulmonary hypertension.^{5,6} There are two separate theories regarding the etiology of this waveform. Smith & Craige pro-

posed that the dicrotic pulse is due to a reduction in pulse pressure with relative increased contribution of the incisura.⁷ Others have hypothesized that increased arterial resistance exaggerates the dicrotic wave.⁶

Conclusion

A dicrotic pulse is a clue of a low cardiac output state, seen in conjunction with an elastic peripheral vasculature and an intact aortic valve. It may be seen in normal young patients, cardiac tamponade, constrictive pericarditis, primary pulmonary hypertension, and tachycardia. It is produced in the presence of a low pulse pressure in combination with an exaggerated incisura.

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State Health Watch

Information provided by the Arkansas Department of Health

A Review of *Vibrio Vulnificus* Infections Related to Eating Raw Oysters, Including Three Cases in Arkansas Residents

There is an increasing number of cases of *Vibrio vulnificus* (Vv) infections being reported in the U.S., with a significant number of these resulting in death. Severity of disease and probability of death are increased in persons who have chronic liver disease or who are immunocompromised by diseases such as diabetes or AIDS. Nationwide, 14 states have reported infections with Vv from raw oysters since 1981.

Florida has reported the highest total of Vv infections, with 72 infections reported for the 1981-1992 period. Thirty-six (50%) of the patients died, making this infection the leading cause of reported deaths from foodborne illness in Florida.¹

Louisiana has made Vv infections reportable, and has extensive data. During 1985-1994, 91 cases, with 23 (25%) deaths, were reported.²

Vv infection currently is not a reportable disease in Arkansas, but three deaths from Vv infections occurred in Arkansas in the past two years. These cases illustrate the deadly potential of Vv, especially with preexisting liver disease as a risk factor. All three of Arkansas' fatal cases followed consumption of seafood by persons with chronic liver disease. A 74-year-old woman died in May 1994. Although it was reported that she had eaten seafood in a Dallas, Texas, restaurant, the exact food(s) eaten was never ascertained. However, it could have included raw oysters. Her medical record revealed a history of chronic liver disease. Another fatal infection was reported in a 42-year-old man who ate raw oysters and was stung by a jellyfish while on vacation at a Gulf Coast beach. He experienced disseminated intravascular coagulopathy, massive bleeding, kidney failure, and cardiovascular failure. He had a history of hepatitis C, and autopsy revealed hepatic cirrhosis. A 45-year-old man had consumed raw oysters, as he was reported to do on an occasional basis, one day prior to becoming ill. His illness progressed rapidly, and he died four days later of septicemia and shock.

Vibrio vulnificus is a free-living, motile, gram negative bacillus which occurs naturally in the marine environment, rather than as a result of pollution by hu-

man or animal fecal waste. It has worldwide distribution and is common in estuarine waters of the Gulf of Mexico where it may contaminate oysters and other shellfish and cause infection of open wounds.¹ Restriction of oyster harvesting to areas free of fecal contamination has reduced the risk of foodborne illness from many viral and bacterial pathogens, but there are no known sanitation or public health controls which can limit the harvesting of oysters to areas free of Vv.² Therefore, exposure to Vv by consumption of raw oysters can be expected to continue, even when shellfish are legally harvested and properly handled.

Since Vv infection became a reportable disease in Florida (in 1981), Vv infections resulting from raw oyster consumption have been less than 1% of all reported foodborne illnesses, but have caused 80% of deaths associated with foodborne illness. Contamination with other *Vibrio* species accounted for an additional 18% of deaths.

Vv infection can be acquired by consuming shellfish or by percutaneous exposure to the organism through contact with seawater, fish, or shellfish. Because persons may report both types of exposure before becoming ill, it is often difficult to determine the actual route of infection in an individual case. In addition, information about reported exposure is not always complete.

In Louisiana, among cases for which exposure information is known, 57% (36/63) had eaten shellfish within the 7 days preceding onset of illness, and 71% (52/73) had a skin or wound exposure to seawater. Oysters were the shellfish most often consumed, followed by shrimp and crabs.

Patients with oyster associated Vv infection and preexisting liver disease are at increased risk of death. The case fatality rate in such cases in Florida was 63%, compared to 25% for cases not having liver disease. Louisiana cases were similar, with 40% having preexisting liver disease. Other important risk factors are conditions which lower stomach acid or impair immunity.

Oyster associated infections are most commonly

found in males in Florida (94%) and Louisiana (88%). The mean age of patients with preexisting liver disease was 58 years; for those without liver disease, mean age was 59 years. There is a distinct seasonal variation with 85% of the cases reported occurring during the months of May-October and only 1% from December-February. This correlates positively with reports of increases in Vv colony counts in cultured oysters, from undetectable levels during winter months to over 200,000 organisms per gram during warmer months.

Apparently, many seafood meals containing raw shellfish contaminated with Vv are eaten each year with no ill effects. However, the consumption of raw oysters by persons with preexisting liver disease was linked to an average annual risk of illness of 70.9 per 1 million adults, or 80 times the risk among raw oyster eaters without liver disease. The average annual risk of death was 45.3 per million, more than 200 times greater than the risk for raw oyster eaters without liver disease.

Until an effective means is found to eliminate contaminated oysters from the market place, prevention must rely upon educating consumers regarding the risks associated with consuming raw oysters, and providing them with guidelines for safe cooking. An im-

portant part of this effort are physicians who take time to warn their patients with liver disease not to eat raw oysters.

The Arkansas Department of Health, Division of Environmental Health Protection, Food Protection Services Section has proposed amendments to the Rules and Regulations Pertaining to Shellfish. The first amendment would require that all food service establishments selling raw shellfish post a notice to the public regarding the hazards of consuming the product. The notification can be made using several different methods such as table tents, menu statements, etc. The second amendment would prohibit the sale of raw oysters which were harvested from the Gulf of Mexico during the summer months. This does not prohibit the use of this stock in a cooking process. We hope that these changes will lower the risk of Vv infections in the state and will help to educate the public as to the risks involved.

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Elevated Blood Lead Levels Now a Reportable Condition

On January 26, 1996, the State Board of Health approved an amendment to the Rules and Regulations pertaining the Communicable Disease Control which requires that elevated blood lead levels in Arkansas citizens be reported to the Arkansas Department of Health. Responsible for reporting are physicians, nurses, practitioners, and medical administrators having knowledge of the condition. In addition, all laboratories that test human blood for lead are required to report their elevated results to the Division of Epidemiology by means of laboratory reports mailed to the Arkansas Department of Health, Division of Epidemiology, Slot 32, Little Rock, AR 72205, or by phone using the toll free reporting system, 1-800-482-8888.

Elevated levels are as follows: Children 14 years or younger - all readings more than 10 micrograms per

deciliter (10 ug/dl). Adults and those more than 14 years of age - readings more than 25 ug/dl.

Reports should contain the physicians or clinicians name, address and phone number; the patients name, address and phone number. The patients age, race, sex, occupation, symptoms, and test results.

The patient will be counseled concerning the source of the exposure, remedial actions and how to avoid future exposures.

The data accumulated will be the basis for a surveillance system that will identify problem areas such as lead-based paint in housing areas, occupational exposures in the workplace, and individual exposures from water supplies or eating and drinking from lead containing ceramics, glassware, etc.

Influenza Update

Arkansas - Through early February 1996, the Arkansas Department of Health has obtained 26 positive influenza cultures for the 1995-96 flu season. Twenty five are type A (subtype unknown) and one is type B. Counties with positive cultures for type A are: Ashley, Baxter, Bradley, Cleburne, Craighead, Cross, Dallas, Faulkner, Garland, Grant, Hempstead, Howard, Hot Spring, Little River, Pike, Pulaski, Van Buren, Washington and White. Pulaski County has the only reported type B.

United States - For the week ending January 27, 1996, influenza activity as assessed by state and territorial epidemiologists was reported as "widespread" in 12 states, "regional" in 14 states (including Arkansas), and "sporadic" in 21 states. Three states reported "no activity." Influenza type A has accounted for 99% of the isolates reported during this flu season.

More information on influenza in Arkansas may be obtained by calling the Arkansas Department of Health, Division of Communicable Disease & Immunization at (501)661-2784.

Reported Cases of Selected Reportable Diseases in Arkansas

Profile for December 1995

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Dec. 1995	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases YTD 1993	Total Reported Cases 1994	Total Reported Cases 1993
Campylobacteriosis	11	151	187	130	187	130
Giardiasis	5	128	126	150	126	150
Shigellosis	47	175	193	201	193	201
Salmonellosis	19	331	534	402	534	402
Hepatitis A	61	663	253	74	253	74
Hepatitis B	11	90	60	90	60	90
HIB	0	6	6	8	6	8
Meningococcal Infections	6	39	53	27	55	27
Viral Meningitis	1	30	62	79	62	79
Lyme Disease	0	8	15	8	15	8
Rocky Mountain Spotted Fever	0	30	18	17	18	17
Tularemia	1	21	23	36	23	36
Measles	0	2	5	0	5	0
Mumps	0	5	7	10	7	10
Rubella	0	0	0	0	0	0
Gonorrhea	**	**	7078	7590	7078	7590
Syphilis	**	**	1324	1612	1324	1612
Legionellosis	0	5	16	6	16	6
Pertussis	2	40	33	17	33	17
Tuberculosis	32	249	264	209	264	209

** Unavailable at time of printing.

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Arkansas HIV/AIDS Report

1983-1996

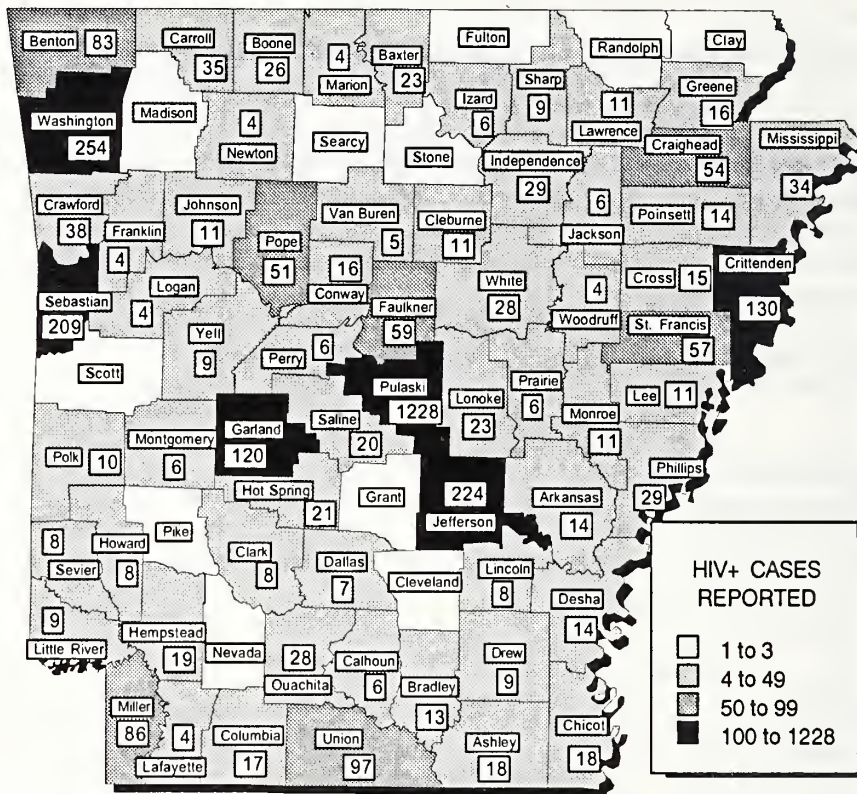
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



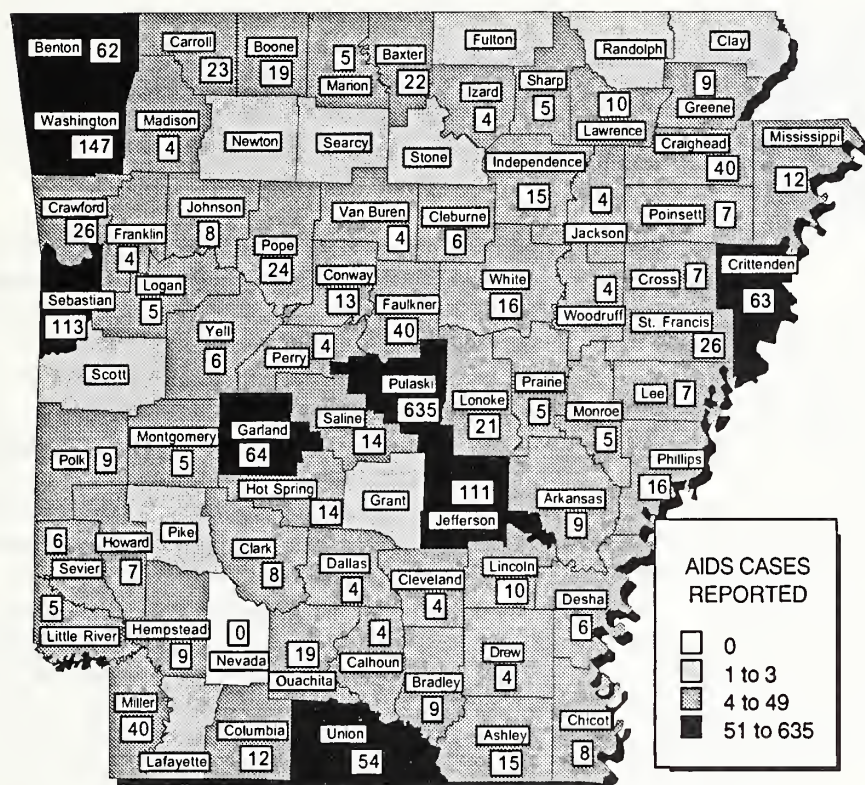
County of residence at the time of test for the 3,437 Arkansans reported to be HIV+. (1/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	100	215	248	413	400	392	352	367	338	25	2,850	83
	Female	8	26	37	68	85	81	94	90	92	6	587	17
AGE	<5	1	1	2	8	13	6	3	7	2	0	43	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	1
	13-19	0	7	8	14	19	25	11	22	12	3	121	4
	20-29	33	110	123	183	149	156	175	145	126	6	1,206	35
	30-39	44	86	104	196	208	179	168	171	182	12	1,350	39
	40-49	22	25	35	56	70	67	65	77	70	5	492	14
	>49	8	6	11	17	22	38	23	35	37	5	202	6
RACE	White	87	170	174	328	298	293	278	259	261	16	2,164	62
	Black	21	69	108	151	184	173	163	184	159	13	1,225	36
	Hispanic	0	1	2	1	3	4	1	7	3	1	23	1
	Other/Unknown	0	1	1	1	0	3	4	7	7	1	25	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	141	6	1,707	50
	Injection Drug User (IDU)	13	30	48	74	96	75	64	71	45	4	520	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	23	2	236	7
	Hetero. (Known Risk)	5	25	26	59	64	68	100	88	46	1	482	14
	Transfusion	5	5	4	6	8	10	0	2	1	0	41	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	35	41	23	12	9	34	169	18	362	11
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	430	31	3,437	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,437 Arkansans reported to be HIV+, 1,917 have been diagnosed with AIDS. (1/12/96)

AIDS In Arkansas

Reporting Requirements

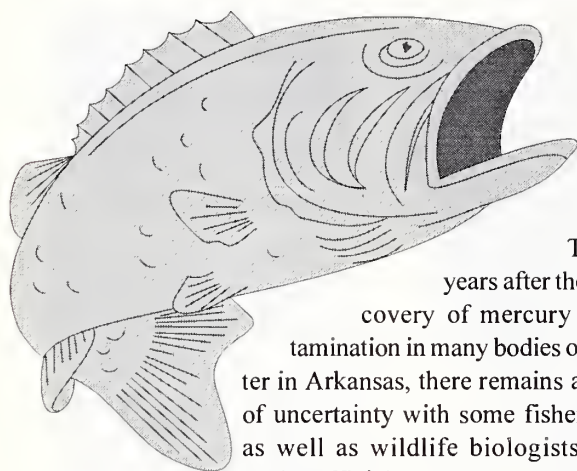
HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	85	77	70	170	176	250	336	253	238	15	1,670	87
	Female	5	6	10	20	25	35	64	42	36	4	247	13
AGE	<5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	0	17	1
	20-29	31	27	24	55	57	81	110	67	58	4	514	27
	30-39	39	36	41	78	80	128	178	133	124	10	847	44
	40-49	15	10	7	35	41	52	78	61	52	2	353	19
	>49	5	8	7	11	13	19	27	30	35	3	158	8
RACE	White	74	61	58	141	134	206	275	190	174	12	1,325	69
	Black	16	20	21	47	66	75	121	102	97	6	571	30
	Hispanic	0	1	0	0	1	3	3	2	3	1	14	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	126	5	1,124	59
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	39	0	274	15
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	19	1	154	8
	Hetero. (Known Risk)	5	3	7	11	12	24	52	41	20	0	175	9
	Transfusion	2	7	3	7	11	3	2	4	2	0	41	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	0	34	2
	Undetermined	0	2	1	3	1	2	2	9	58	13	91	4
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	274	19	1,917	100

Arkansas Department of Health HIV/AIDS Surveillance Program



Arkansans learning to live with mercury in fish

Three years after the discovery of mercury contamination in many bodies of water in Arkansas, there remains an air of uncertainty with some fishermen as well as wildlife biologists and health officials.

Where is the mercury coming from? No one has found out. Is it a danger to everyone? Apparently not, even with people who eat fish from the "hot" streams and rivers. But some cautions continue to be strongly suggested.

A pamphlet produced by the Arkansas Game and Fish Commission, Arkansas Dept. of Health and Arkansas Dept. of Pollution Control and Ecology puts the known mercury information in concise form and is available free from any of the three state agencies.

One section is headed "Can we make fish safe to eat?" and tells Arkansans that no special cleaning or cooking methods will decrease mercury in fish. Mercury is stored in the fish fillet or muscle parts, not in the fat. Removing fat or skin from the fish will not lower mercury levels.

Health risks from eating fish contaminated with mercury can be reduced in three ways: (1) Know what species and sizes of fish are covered under a consumption advisory. In most Arkansas advisory waters, only largemouth bass and catfish are affected, and bream and crappie are completely safe to eat. This information is updated regularly and is available from the Game and Fish Commission and Dept. of Health. (2) Always eat the smaller fish of a contaminated species since younger, smaller fish contain less mercury. For example, largemouth bass under 16 inches long are usually free from high levels of mercury. (3) Eat fish from a variety of sources, including fish markets and grocery stores, to break up routine fish consumption patterns.

No source for the mercury contamination in south Arkansas has yet been found. The experts are thinking it's coming from the air (coal and waste incineration), from natural elements in the soil or perhaps from a combination of the two. The possibility of a hidden discharge pipe from

some factory or other installation dumping contaminants into the water has been eliminated. Nothing along this line has been found, and much testing has been done downstream from various industries.

The amounts of mercury found in Arkansas fish can't cause immediate sickness. Mercury can collect in the body over time and could have effects on human health, mostly with the nervous system and the kidneys.

Young children and expectant mothers are more susceptible to problems stemming from mercury than other people. These are considered high risk groups and as a general rule should not eat any fish from areas covered in the advisories. Other persons who eat fish from these areas only occasionally, once every two or three months, aren't at risk, though.

Case histories with Arkansas people in the past three years confirm what scientists in other areas have said: Normal processes of the human body will eliminate high levels of mercury within nine or 10 weeks, depending on the level of mercury in a person.

Just what is mercury? It is a chemical that occurs naturally in soil. It can exist in several forms such as elemental mercury used in thermometers, inorganic mercury used in manufacturing processes and organic mercury which builds up in the food chain. All these forms can be threats to human health if the mercury builds up in a person's body.

Testing of fish is continuing all over Arkansas by a task force appointed by Governor Jim Guy Tucker. The tests are being done on lakes and streams in all counties, and follow-up tests are being conducted on fish in waters where mercury has been detected previously.



New Members

BLYTHEVILLE

Lorenzo, E. B., Psychiatry & Neurology. Medical Education, University of Santo Thomas, Manila, Philippines, 1965. Internship, St. Joseph Hospital, Reading, Pennsylvania, 1966. Residency, University of Missouri School of Medicine, Kansas City, 1969. Fellowship, Western Missouri Mental Center, Kansas City, 1972. Board eligible.

CONWAY

Shaw, Collie Blevins, Otolaryngology. Medical Education, UAMS, 1990. Internship/Residency, West Virginia University School of Medicine, 1991/1995.

DECATUR

Karassi, Malek S., Internal Medicine. Medical Education, Aleppo University, 1989 and Chicago Medical School, 1992. Residency, UAMS, 1994. Fellowship, University of California, 1995. Board certified.

EL DORADO

Harper, William Lee, Family Practice. Medical Education, UAMS, 1983. Internship/Residency, AHEC South Arkansas, El Dorado, 1984/1986. Board certified.

FLIPPIN

Simons, Roger D., Family Practice. Medical Education, University of Texas Medical Branch, Galveston, 1974. Residency, St. Joseph Medical Center, Wichita, Kansas, 1977. Board certified.

FORT SMITH

Seffense, Stephen Joseph, General Surgery. Medical Education, Texas Tech University, Lubbock, 1990. Internship/Residency, University of Utah, 1991/1995. Board pending.

HARRISON

Bennett, Chris Neville, Radiology. Medical Education, UAMS, 1983. Internship/Residency, 1984/1988. Board certified.

Brand, Robert Lynn, Radiology. Medical Education, UAMS, 1989. Internship, UAMS, 1990. Residency, Methodist Hospitals of Memphis, 1994. Board certified.

Morris, Robert L., Radiology. Medical Education, University of Iowa College of Medicine, Iowa City, 1968. Internship, Good Samaritan, Portland, Oregon, 1969. Residency, University of Wisconsin Medical School, 1972. Board certified.

HOPE

Johnson, David Lawrence, Surgery. Medical Education, Baylor College of Medicine, Houston, 1970. Internship, Presbyterian Medical Center, Denver, 1971. Residency, Baylor College of Medicine, Houston, 1975. Board certified.

LITTLE ROCK

Antle-Vlach, Victoria Jane, General Medicine. Medical Education, Wright State University School of Medicine, Dayton, Ohio, 1994. Internship, St. Luke's Hospital, Kansas City, Missouri, 1995.

Kamanda, Stella M., Hematology-Oncology. Medical Education, St. Louis University School of Medicine, 1989. Internship, St. Louis University, 1990. Residency, Louisiana State University, Shreveport, 1992. Board certified.

Paul, William Luther, Anesthesiology. Medical Education, University of Kentucky, Lexington, 1972. Internship, University of South Florida, 1973. Residency, University of Florida, 1975. Board certified.

RESIDENTS

Bakhtawar, Iram, Internal Medicine. Medical Education, Agakhan University, Pakistan, 1993. Internship, UAMS, 1996.

Hatcher, Stacey L., Internal Medicine. Medical Education, University of Texas Medical School, Houston, 1994. Internship, Good Samaritan Regional Medical Center, Phoenix, Arizona, 1995. Residency, UAMS, 1997.

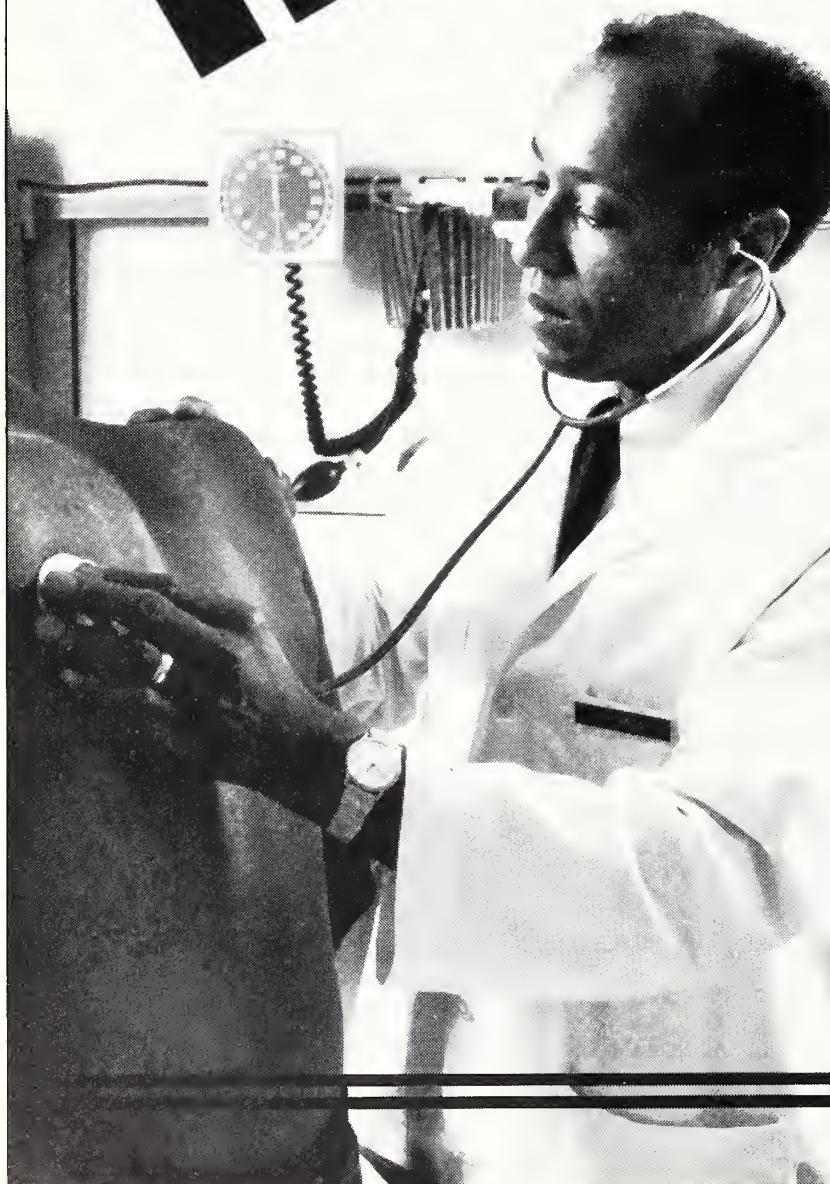
Sorenson, Marney Keith, Surgery. Medical Education, University of Texas Health Science Center, San Antonio, 1991. Internship, UAMS, 1992. Residency, UAMS, 1996.

STUDENTS

Brian Terry Bean
James N. Wise



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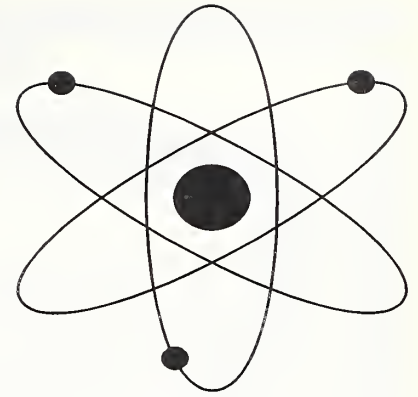
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Radiological Case of the Month



W. Jean Matchett, M.D.
Jon Roberts, M.D.
John F. Eidt, M.D.
Dennis W. Berner, M.D.
Lee Nix, BSN, RN, RVT
David Harshfield, M.D.

History:

A 34-year-old white male complained of painful left toes and calf claudication. He was a smoker, with a history of familial cardiovascular disease. There was no history of diabetes, hypertension, MI or stroke. On physical exam his distal pulses were palpable bilaterally and the third and fourth toes of the left foot were discolored.

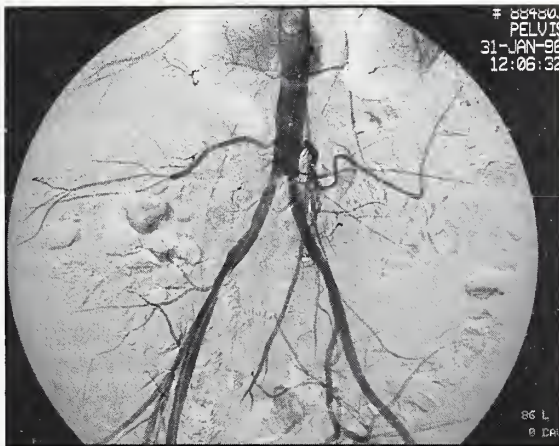


Figure 1: Diagnostic arteriogram

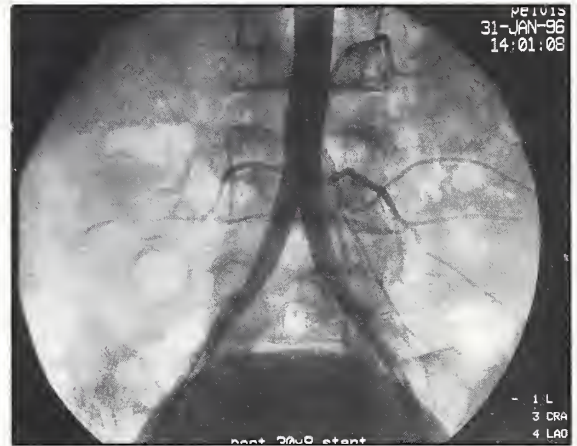


Figure 2: Arteriogram post stent placement

Diagnostic Examinations:

Noninvasive arterial exam

The ankle-brachial index (ABI) was slightly decreased bilaterally, right = 0.85, left = 0.81 (normal ankle pressure/arm pressure = 0.9-1.0). The pressures at the thighs were equal to arm pressure (normally 20-30mm Hg higher than the arm due to inadequate width of the cuff for accurate measurement of thigh pressure). Common femoral Doppler acceleration times, right = 0.14 sec., left = 0.13 sec. (normal is <.12 sec) and thigh pressures suggested aortoiliac disease. In this patient, duplex ultrasound successfully interrogated the common iliac arteries, finding increased velocities indicative of stenoses. There was no aortic or popliteal aneurysm. After minimal treadmill exercise he developed left foot and calf pain with significant decrease in the left ankle pressure (exercise is often essential to elicit a pressure drop in patients with isolated aortic or iliac disease).

The non-invasive arterial exam accurately predicted the level of disease and allowed planning with the patient and surgeon for radiologic intervention.

Arteriography (Figure 1) confirmed bilateral, severe common iliac stenoses, left greater than the right. There was no significant aortic disease. The remainder of the bilateral lower extremity arteriogram was normal.

Blue Toe Syndrome

Diagnosis: "Blue Toe Syndrome" from left iliac stenosis, with asymptomatic right iliac stenosis.

Treatment:

Palmaz stents, 8-12mm x 30mm, were placed bilaterally in the common iliac arteries after "kissing balloon" predilatation. This procedure was performed from a percutaneous, retrograde femoral artery approach, bilaterally. The post angioplasty arteriogram demonstrated persistent irregularity of the common iliac arteries. After stent placement there was excellent angiographic patency (Figure 2) and there was no pressure gradient across the iliac arteries. Heparin was administered during the procedure and re-initiated four hours after removal of the femoral sheaths for an additional 24 hours. The patient was discharged on low dose coumadin. Anticoagulation after stent placement is controversial, but was continued in this case because of the small 8mm diameter of the common iliac arteries. Two weeks after the procedure the patient's pain and toe discoloration were gone. Non-invasive studies demonstrated normal ABI's bilaterally and no drop in ankle pressure after 5 minutes of exercise.

Discussion:

Blue toe syndrome is the familiar term for microembolization. The source of the emboli can occur from any proximal stenosis or atheroma, but commonly is aortoiliac. Aortic aneurysms and ulcerative aortic lesions are often sources.⁶ Clinically, it is characterized by the sudden onset of pain in a digit, typically a toe, accompanied by bluish discoloration. The pain is very severe and poorly controlled even with narcotic analgesics. Errors in the initial diagnosis of blue toe syndrome are common. Patients are commonly treated for gout and other forms of arthritis, "stone" bruise, frost bite, Raynaud's Disease, Buerger's Disease, paronychia and minor trauma. Patients often have palpable pulses. In this case the single level disease produced near normal resting ABI's, but exercise helped to elicit symptoms of his more severe left iliac stenosis.

Percutaneous transluminal angioplasty (PTA) is an effective treatment of iliac stenoses, with a patency rate at 5 years of approximately 72%.¹ Traditionally, stenotic lesions producing emboli producing lesions with PTA.^{2,3} In both of these reports PTA was successful and caused no further embolization. A newer method of treating arterial stenoses is transluminal placement of stents. These stents are metallic scaffolds which support patency of the artery after suboptimal angioplasty or in occlusive segments. Hypothetically, the stent will produce better scaffolding of the lesion's embolic component. Current indications for stent placement include: dissection after PTA and persistent stenosis and/or pressure gradient across the lesion after PTA. Long-term results of stenting are impressive, with a primary patency rate of 85% at five years.^{4,5} Comparative studies of primary stenting and PTA alone are ongoing.⁵ Currently, there are no reports of primary stent placement versus PTA for lesions producing emboli. In some case, due to the severity of the atherosclerotic process, surgical endarterectomy may be chosen instead of PTA, with excellent long-term results. Uncommonly these lesions are treated medically but require close follow-up to prevent adverse outcomes.⁶

The Palmaz stent is the only stent approved by the Food and Drug Administration for use in the iliac arteries. The stainless steel Palmaz stent is crimped on an angioplasty balloon and expanded at the level of disease with inflation of the balloon. The Palmaz stent was proven effective in the treatment of limb ischemia and claudication.⁴ In this case it is likely to prevent further embolization.

References:

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2. Kumpe DA, Zwerdlinger S, Griffin DJ. Blue digit synd.: treatment with percutaneous transluminal angioplasty. Radiology 1988; 166:37-44.
3. Brewer MI, Kinnison ML, Perler BA, White RI Jr. Blue toe syndrome: treatment with anticoagulants and delayed percutaneous transluminal angioplasty. Radiology 1988; 166:31-36.
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6. Wingo, JP, Nix ML, Greenfield, LJ, Barnes, RW. The blue toe synd.: hemodynamics & therapeutic correlates of outcome. J Vasc Surg 1986; 3:475-80.

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Editor: David Harshfield, M.D., is director of radiology at Riverside Imaging Ctr. & Clinical Assoc. Prof. of Radiology at UAMS.

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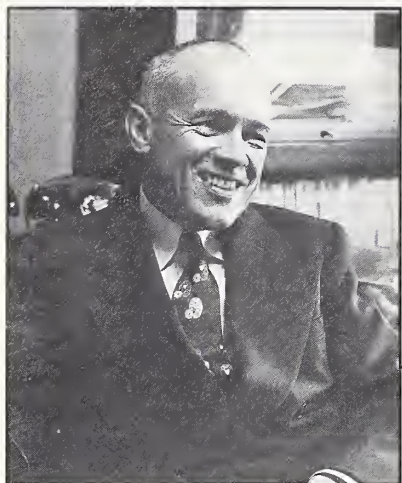
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Hayden Coler Nicholson, M.D. (1904-1995)

Edwina Walls, MLS, AHIP*

Hayden C. Nicholson was the Provost of the UA Medical Center (1954-55) and the fourteenth Dean of the School of Medicine (1950-55). Dan Nicholson was born February 4, 1904, in Redwood Falls, Minnesota, the son of Ernest Crawford and Alma Helena (Bordeaux) Nicholson. He received A.B. (1925), M.S. (1927), and M.D. (1929) degrees at the University of Michigan. The year of his graduation, he married Marian Louise Lawless and the couple had one child, Barbara Louise (Mrs. Jerry) Titel. Bypassing an internship, he began teaching in the Physiology Department at Ann Arbor and remained there until 1946 except for two years in the Army Air Force Medical Corps. The next four years, he was employed by the National Research Council serving as Executive Secretary of the Committee on Growth the last three years.

Appointed as Dean of Arkansas' School of Medicine October 1, 1950, Nicholson developed a close relationship with UA President Lewis Webster Jones. Together they planned a successful public and political campaign which was vital in securing state appropriations for the new Medical Center. Governor McMath developed the package for a two-cent tax on cigarettes to finance the building of the hospital. However, Dr. Nicholson finalized the architectural plans, monitored the construction project, day-by-day, and provided the necessary leadership to make the Medical Center a reality.

Dean Nicholson was able to enlist the support of both the county and state medical societies in a manner that has been unequalled in the history of the campus. Also, he appointed a Medical Center Advisory Board of distinguished citizens to lead a later cam-

paign for the Center. With his magnanimous smile, his encompassing interest and enthusiasm, his intellect and sensitivity to the issues, and his wonderful relationship with the local press, he was able to birth a modern Medical Center which is his legacy to the state of Arkansas. In a letter to former Dean William C. Langston in 1953, Nicholson stated of his success, "If I have made any contribution, I think, it has been toward helping the people of Arkansas to realize that they have a good school and one which merits their support." Among his other accomplishments at the Medical Center were the recruitment of talented faculty for the Medical Center; his focus on a rural state's need for general practice physicians; and his expansion of internship/residency opportunities in the state.

In 1954, Nicholson was named Provost of the Medical Center because of the need for an administrator for all schools. He served as Provost and Dean simultaneously until May 1955 when he resigned to become Executive Director of the Hospital Review and Planning Council of Southern New York. In 1962, he returned to academic administration, serving as Dean and later as Vice President for Medical Affairs at the University of Miami School of Medicine.

In 1972, he retired to Glen Ellyn, Illinois, relocating in the fall of 1987 to Santa Clara, California, to be near his daughter. He died there on December 12, 1995, of complications of prostate cancer. He is survived by his daughter, Barbara, of Los Gatos; two grandchildren, Carrie Boehm of Sunnyvale, California, and Kenneth Titel, D.M.D. of Malden, Mass.; and two great-grandchildren, Alyson and Kyle Boehm of Sunnyvale.

(Adapted from Bruce, Thomas A.: "The Medical School Deans: Sketches of Leadership," in *Historical Perspectives: The College of Medicine at the Sesquicentennial*, 1986.)

* Edwina Walls, MLS, AHIP, is chair of the Historical Research Center at the University of Arkansas for Medical Sciences.

In Memoriam

Robert W. Ross, M.D.

Dr. Robert W. Ross, of Little Rock, died Saturday, February 10, 1996. He was 77. He was preceded in death by his sister, Mrs. Vera Gibson and brother, Mr. Graham Ross. Survivors include his brother, Mr. Jack Ross of Conway; two sisters, Mrs. Mary Cone of Clifton, TX and Mrs. Idella Harbour of Little Rock; three nieces, Mrs. Mary Jo Harvanek and Miss Nancy Cone both of Dallas, TX and Mrs. Patricia Jo Childress of Knoxville, and a nephew, Mr. Jim Cone of Clifton, TX.

Resolutions

William A. Runyan, M.D.

WHEREAS, the members of the Pulaski County Medical Society are saddened to learn of the recent death of an esteemed colleague, William A. Runyan, M.D.; and

WHEREAS, Dr. Runyan served this organization as a loyal member for over twenty years, giving freely of his time and talent towards its betterment; and

WHEREAS, he was trusted and respected by his fellow physicians for the concern and care he demonstrated in the treatment of his patients;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and filed in the permanent files of this Society; and

THAT, a copy of this resolution be forwarded to Dr. Runyan's family as a token of our heart-felt grief; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

H. Thurston Black, M.D.

WHEREAS, the membership of the Pulaski County Medical Society notes with sincere sorrow the recent death of a respected member, H. Thurston Black, M.D.; and

WHEREAS, he was a faithful member of this Society for forty-five years; and

WHEREAS, Dr. Black will be remembered by his peers and patients alike as a capable and caring physician;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the archives of this Society; and

THAT, a copy of this resolution be mailed to Dr. Black's family as a token of our sympathy; and

THAT, a copy of this resolution be made available to *The Journal of the Arkansas Medical Society* for publication.

Debra Lynn Velez Owings, M.D.

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of a respected colleague, Debra Lynn Velez Owings, M.D.; and

WHEREAS, Dr. Owings' service to this Society as Scholarship Committee Chairman and as a member of the Board of Directors was marked by selflessness and devotion; and

WHEREAS, she was highly esteemed by her colleagues for her expertise in her chosen field of Pathology; and

WHEREAS, Dr. Owings was a blessing and an inspiration to all those who knew her;

BE IT THEREFORE RESOLVED:

THAT, this resolution be adopted and placed in the permanent files of this Society; and

THAT, a copy of this resolution be sent to Dr. Owings' family as an expression of our heart-felt sympathy; and

THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Adopted:

January 17, 1996

Board of Directors

By Order of the Memorials Committee

Fred O. Henker, M.D., Chairman

James W. Headstream, M.D.

Bruce E. Schratz, M.D.

Things To Come

March 27 - 30

6th Annual Challenges in the Clinical Practice of EMERGENCY MEDICINE. Presidente Inter-Continental Resort, Cozumel, Mexico. Sponsored by Symposia Medicus. For more information, call (510) 935-7889 or (800) 327-3161.

March 28 - 30

Physician Entrepreneurship: Principles, Practices and Tactics for Business Plan Development. Allen Center - Northwestern University Campus, Evanston, Illinois. Sponsored by the American Medical Association. For more information, call (312) 464-4274.

ARKANSAS LOCATION

March 28 - 30

Symposium on Critical Care and Emergency Medicine. The Arlington Resort Hotel and Spa, Hot Springs, Arkansas. Sponsored by the University of Arkansas for Medical Sciences and The University of Tennessee, Memphis College of Medicine. For more information, call (501) 661-7962.

April 18 - 21

27th Annual Medical-Scientific Conference. Atlanta Marriott Marquis, Atlanta, Georgia. Sponsored by the American Society of Addiction Medicine. For more information, call (301) 656-3920.

April 26 - 28

1996 Pediatric Update for the Primary Care Physician. The Westin Canal Place, New Orleans, Louisiana. Sponsored by the Alton Ochsner Medical Foundation and the Tulane University School of Medicine. For more information, call (504) 842-3702 or (800) 778-9353.

April 26 - May 3

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

ARKANSAS LOCATION

May 2 - 4

Arkansas Medical Society 1996 Annual Convention. Excelsior Hotel and Statehouse Convention Center, Little Rock, Arkansas. For more information, call (501) 224-8967 or 1-800-542-1058.

May 5 - 6

Fourth Annual American Medical Association Conference on Physician Payment. La Mansion del Rio, San Antonio, Texas. For more information, call 800-621-8335.

May 13 - 24

7th Annual Tropical Health Update. Tulane University School of Public Health & Tropical Medicine, New Orleans, Louisiana. Sponsored by the Office of Continuing Education and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

June 6 - 9

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

July 25 - 27

Clinical Allergy for the Practicing Physician. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

Keeping Up

April 12

Beyond Traumatic Brain Injury in Children and Adolescents. Sponsored by UAMS College of Medicine. Location: Brandon Conference Center, Arkansas Children's Hospital. 8:00 a.m. - 4:30 p.m. Category I credit hours offered: 6. Fee: TBA.

April 20

Diabetes Update 1996. Sponsored by UAMS College of Medicine. Location: Holiday Inn West, Little Rock. 8:00 a.m. Category I credit hours offered: 5.5. Fee: \$75 for physicians - \$50 for others.

April 26

Acute Stroke Intervention. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

April 27 - 28

13th Annual W.W. Stead Chest Symposium. Sponsored by UAMS College of Medicine. Location: Red Apple Inn at Eden Isle, Heber Springs. Category I credit hours offered and fee: TBA.

May 9 - 10 & November 16 - 19

Surgical Treatment of Erectile Dysfunction with Penile Prosthetic Implantation. Sponsored by UAMS AHEC - Fort Smith. Location: Crawford County Memorial Hospital, Van Buren. Fee: \$350. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

May 10

Update on "Any Willing Provider." Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

May 24

The Future of Medical Education. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

May 31 - June 2

18th Annual Family Practice Intensive Review Course. Sponsored by UAMS College of Medicine, Department of Family and Community Medicine. Location: UAMS, Education II Building, Little Rock. Category I credit hours offered and fee: TBA.

June 14

Vitamins in Alternative Medicine. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

June 23 - 28

Intensive Workshop in Health Care Ethics. Sponsored by UAMS Division of Medical Humanities. Location: Freeway Medical Center, Suite 500, Little Rock. Fee: \$375 - includes all course materials, breakfast, receptions and two dinners. Category I credit hours offered: TBA. For more information, call: 501-661-7970.

June 28

Annual AHEC Fort Smith CME Seminar. Sponsored by UAMS AHEC - Fort Smith. Location: Holiday Inn, Fort Smith. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

June 28

Hemodialysis Access Problems. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Wednesdays, 12:00 noon, Sturgis Bldg., room 457
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Wednesday, July 3, 12:00 noon, Southwestern Bell/Arkla room.
Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.
Interdisciplinary AIDS Conference, April 12th only in Smith Room
Journal Club, March 12th Conference only in Medical Affairs Conference Room
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, 1st Tuesday in March, May and July

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock
Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month
LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GRECC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas

GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom
Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria
White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital
Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center
Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital
Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 11

April 1996

PPO's, HMO's, Workers' Comp, Healthcare Reform...

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 11

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CONTENTS

FEATURES

- 533 **Medicine in the News**
Health Care Access Foundation Update
Letter and Review of The Medical Records Confidentiality Act of 1995
Update: AMA's Correct Coding Policy Committee Approved by HCFA
New Report on Tobacco Use in Arkansas
- 539 **Update: Newborn Screening for Galactosemia**
Scientific Article
Robert West, M.D.
James B. Gibson, M.D., Ph.D.
- 542 **120th AMS Annual Session Schedule & Speakers**
- 544 **Convention Highlights**
- 547 **AMS Annual Session Registration Form**
- 553 **AMS House of Delegates**
- 556 **AMS Nominating Committee Report**
- 558 **AMS Reference Committee Agendas**
- 559 **AMS Business Reports for Reference Committee #1**
- 571 **AMS Business Reports for Reference Committee #2**
- 581 **1996 MED-PAC Contributors**
- 582 **1995 MED-PAC Contributors**
- 585 **Memorials**

Register Today!

DEPARTMENTS

- 540 **AMS Newsmakers**
- 587 **Cardiology Commentary & Update**
- 589 **State Health Watch**
- 592 **Arkansas HIV/AIDS Report**
- 594 **New Members**
- 595 **Radiological Case of the Month**
- 598 **In Memoriam**
- 598 **Things to Come**
- 599 **Keeping Up**

Cover photo of Dr. James Armstrong, AMS President, and Dr. John Crenshaw, AMS President-elect, was taken by Joel Schmidt of Joel's Photography.

Managed Care: *Global or Local?*



Arkansas Managed Care Organization Serves Local Partnerships Providing Community Care.

The world of managed care is expanding, often ignoring the benefits of local partnerships among employers, employees, doctors and hospitals. The global outlook suggests restricted health care delivered *only* by those providers who agree to lower rates in return for guaranteed patients. Arkansas Managed Care Organization (AMCO) believes there is a better way to reduce cost and ensure quality care.

Health Care's Better Way

Formed as a PPO in 1994, AMCO has assembled a strong network of 1,700 local doctors and 38 local hospitals covering 75% of Arkansas. Our philosophy for quality care relies on these stable local partnerships -- run by local boards made up of doctors, hospitals and employers -- to ensure access and affordability. And AMCO can provide coverage to Arkansas' multi-state employers through our national network.

Physician's Practice Where Patients Live

AMCO's local partnerships mean physicians can still practice where patients live, while experiencing practice growth through local employer contracts. The link between managed care and community care combines the benefits of a statewide network with the security and convenience of hometown medical attention.

For information on local partnerships for community care, call AMCO at **1-800-278-8470**.



**Arkansas
Managed Care
Organization**

#10 Corporate Hill Drive • Suite 200 • Little Rock, Arkansas 72205 • (501) 225-8470/FAX (501) 225-7954 • 1-800-278-8470

AMCO is affiliated with Arkansas Medical Society Management Company.

Medicine in the News

Health Care Access Foundation

As of March 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 10,643 medically indigent persons, received 19,542 applications and enrolled 38,733 persons. This program has 1,722 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

Letter and Review of The Medical Records Confidentiality Act of 1995

The following letter and position paper were sent to the U.S. Senate Labor and Human Resources Committee on February 27th, regarding S. 1360, a bill concerning the confidentiality of medical records:

Addressed on February 27, 1996, to The Honorable Nancy Landon Kassebaum, United States Senate, 302 Russell Senate Office Building, Washington, DC 20510.
Dear Madam Chairman:

The American Medical Association (AMA) welcomes the opportunity to share with the Committee our views on the confidentiality of patient medical records, an issue brought to the fore by S. 1360, "The Medical Records Confidentiality Act of 1995." After the bill was referred to the Committee, the AMA, in conjunction with some twenty other national physician organizations, wrote the Committee requesting an opportunity to assist in refining the language of S. 1360. While we noted our express support for the mission of the legislation, our concern was and remains that the language of S. 1360 must be significantly modified to adequately protect the privacy of patients' medical information. The Committee has signaled a willingness to examine the details of the bill and to seek improvement from a variety of parties. We appreciate being included in this reevaluation of the legislation.

The AMA has extensive policy concerning the ethical responsibility of physicians to protect the privacy of our patients' medical records and information in order to assure that those patients are willing to communicate sensitive and personal information to their physicians without fear of subsequent disclosure. Our Board of Trustees has reviewed AMA policy and considerable additional information in its evaluation of S. 1360, and its conclusions are reflected in the attached report.

We look forward to continuing the dialogue on S. 1360 with the Committee and urge you to bring your questions and concerns to us. The AMA supports federal legislation protecting the confidentiality of patient records; however, we regret that we cannot support, in its current form, S. 1360. Thank you for taking our

views into consideration as you explore this complex and important issue.

Sincerely,

James S. Todd, MD

cc: *The Honorable Robert Bennett, The Honorable Thomas A. Daschle, The Honorable Robert Dole, The Honorable Russ Feingold, The Honorable Orrin G. Hatch, The Honorable Herbert H. Kohl, The Honorable Patrick J. Leahy, The Honorable Alan K. Simpson and The Honorable Ted Stevens*

Review of S. 1360 "The Medical Records Confidentiality Act of 1995"

The American Medical Association (AMA) commends the sponsors of S. 1360, "The Medical Records Confidentiality Act of 1995," for focusing attention on the important issue of confidentiality of private medical records. The bill as introduced, however, does not assure adequate confidentiality protections for personally identifiable medical information, and the AMA would discourage the Senate Labor and Human Resources Committee from reporting such legislation without significant reexamination and modification.

The AMA believes that the patient-physician relationship is based first on trust and that the confidentiality of communications within this relationship is the

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cornerstone of good medical care. It cannot be too strongly stated that in order for physicians to provide the best and most appropriate medical care, patients must feel that they can disclose to their physicians personal facts and information that they would not want others to know. Without such assurances, patients may not provide the information necessary to properly diagnose and treat. The evolution of electronic medical records, typified by interstate electronic transmissions and the aggregation of information into large databases that are used for non-treatment purposes, has intensified existing concerns about patients' confidentiality. While the AMA supports federal legislation to protect patients' privacy in an environment of heightened availability and access through computerized networks, we are concerned that S. 1360, without substantial modification, fails to adequately address numerous concerns about medical information privacy.

The AMA's analysis of the issue is based on a threefold premise:

- *that there exists a basic right of patients to privacy of their medical information and records, and that this right should be explicitly acknowledged;

- *that patients' privacy should be honored unless waived in a meaningful way (i.e., informed, noncoercive) or in rare instances of strongly countervailing public interest; and

- *that the information disclosed should be limited to that information or portion of the medical record necessary to fulfill the immediate and specific purpose (i.e., no fishing expeditions).

Within the context of these three overriding principles, the AMA makes the following recommendations by which any medical information or record confidentiality legislation should be assessed:

1. The primary purpose of the medical record is to provide a reliable tool to provide clinical treatment of patients. The medical record is the property of the physician or responsible health care provider or entity who has legal and ethical obligations to maintain a true and accurate record. While patients should have access to the information from the medical record (with rare exceptions to protect the mental or physical safety of the patient), the physical record is the property of the physician or provider. When a provider entity controls the medical records or information, a physician advisory body to the provider (or a medical staff if one exists) should superintend the manner in which the physical record is released. This conceptual frame of reference should be set out explicitly in some sort of legislative preamble and should be recognized in statutory language.

The model contained in S. 1360 for disclosure and correction of patient records, based on the procedures for reporting consumer credit information, is not translatable to the medical information arena and should not be adopted. Subsequent holders of medical information (such as information data banks or other types

of "trustees") should not be allowed to change medical information or conclusions. It follows that the treating physician or health care practitioner that generated the medical information should be the only "trustee" through whom patients may "amend" or "correct" their medical information or records.

2. Often, an entity will seek an individual's authorization for disclosure of his or her protected health information, subsequently using the information for purposes beyond the scope for which the consent was obtained. For example, an insurer with both health and life insurance lines has a legitimate interest in medical information regarding a policy holder for administering health benefits. Without specific authorization from the individual, however, that information should not be available to the insurer for purposes of its life insurance line.

"Firewalls" should be constructed so as to preclude a patient's first consent from applying to all subsequent disclosures (unless the patient specifically and freely waives defined rights). The specificity of the patient's consent creates the "firewall." Requests for information should be specific as to the:

- *portion of the records or information needed (the specific treatment or matter at issue);

- *time period of the records needed (e.g., "from 1990 through the present"); and

- *purpose for which the information is requested.

The specificity of consent is the key to imposing effective "firewalls," to preclude the lateral drift of information once an initial consent is agreed to by the patient. Patients and physicians will feel more protected if a signed consent is required for each disclosure of records, rather than continue to allow for blanket waivers by patients. Blanket authorizations are acceptable for most treatment and payment purposes and "scrubbed" charts; however redisclosure should be prohibited without subsequent authorization. In instances where personally identifiable medical information is part of a requested record that is not easily "de-identified" (for example, when a utilization review company wants to review 25 patient charts), specific permission from the patients should be required. The responsibility for obtaining consent for disclosure should rest with the entity requesting the data.

3. Exceptions to the requirement for patient consent to disclosure should be minimal and narrowly drawn. The burden should be on the requesting entity to demonstrate why its need should override the patient's confidentiality. This burden should be equally applicable for research (both scientific and market-based/economic), law enforcement and any other legitimate purpose.

In the particular instance of exceptions for purposes of law enforcement, the AMA believes the bill should set high standards for non-consented-to disclosures. The AMA recognizes the needs of legitimate law enforcement; however, these needs must be bal-

anced with an individual's expectation of privacy for his or her personally identifiable medical information. The requesting entity should be required to show "probable cause" in establishing why medical records should be divulged without the patient's consent, and the particular information required to meet the immediate law enforcement purpose should be specified. Records thus disclosed for legitimate law enforcement purposes should then be held in camera by the court.

4. Whenever possible, medical information used for research purposes should have all identifying information removed, unless the patient specifically consents to the use of his or her personally identifiable information. The entity requesting protected medical records or information should be required to pay for "de-identifying" the record. The AMA believes that the protections contained in S. 1360 relating to release of identifiable information without authorization when an IRB determines that the need for that information outweighs the individual's right to privacy are adequate without further showing of problems that might currently exist.

5. Regarding the issue of federal preemption of state law, any federal law should provide a "floor," rather than a "ceiling" when applied to patient confidentiality protections. It is understood that there are many who believe that there should be a uniform federal standard to facilitate electronic data interchange (including the Work Group on Electronic Data Interchange (WEDI)). The AMA is concerned, however, that heightened state standards will be lost to federal legislation. If the bar is placed high enough to secure protection of patient information in the federal language, the AMA would revisit the preemption issue.

6. S. 1360 has major penalties for unauthorized disclosure of protected medical information. The AMA believes that penalties and sanctions for unintentional disclosures of identifiable patient information, where the disclosure does not result in demonstrable harm to the subject of the disclosure, should be reduced or eliminated. Penalties and sanctions related to improper disclosure for commercial purposes, profit, malicious purposes or where there is significant patient harm should be commensurate with the violation. In addition to monetary sanctions, legislation could include the loss by a database company, for example, of its privilege to hold or transmit protected medical information, thus reducing the potential for companies to accept the monetary penalties for improper, intentional disclosures as a "cost of doing business."

The AMA does not believe that S. 1360, as it currently stands, meets the principles elaborated above and therefore we do not support the bill in its present form. We do support, however, the need for federal legislation in this area so that patients will be adequately protected as medical information becomes available in new forms and with greater ease of transmission. The AMA appreciates the Committee's ac-

tive efforts to seek input regarding improvements to the bill. The AMA's fundamental concern on this issue has been and continues to be the protection of the patient-physician relationship and the confidentiality that is so basic to the trust inherent in that relationship. *Information provided by the AMA FED-NET.*

Update: AMA's Correct Coding Policy Committee Approved by HCFA

The Health Care Financing Administration (HCFA) has agreed to use an AMA-proposed Correct Coding Policy Committee to receive comments and recommendations on the AdminaStar directed Correct Coding Initiative.

The AMA committee is chaired by Kenneth McKusick, MD (Nuclear Medicine) and is composed of eight other physicians who have extensive experience with either the CPT Editorial Panel or the RUC Committee. The members of the AMA committee are: Joel Grossman, MD (Utilization Review Medicine), Raymond Janevicius, MD (Plastic and Reconstructive Surgery), Walter Larimore, MD (Family Physician), Frank Opelka, MD (Colon and Rectal Surgery), Michael Maves, MD (Otolaryngology), David Roseman, MD (General Surgery), Susan Turney, MD (Internal Medicine) and James Zalla, MD (Dermatology).

The Correct Coding Initiative is code editing software developed by AdminaStar, the Indiana Medicare carrier, and used by each of the Medicare carriers, that went into effect on January 1. The "initiative" is intended to assure that services are not unbundled (i.e. pay only the more comprehensive of two services billed).

Under phase one of the initiative, AdminaStar solicited comments and suggestions on more than 83,000 possible coding combinations. 850 codes were singled out for additional scrutiny. The AMA Correct Coding Policy Committee will soon begin reviewing specialty society comments on those code bundles for input to AdminaStar. The same AMA committee will also facilitate the review of 16,000 additional coding combinations within the next few months.

The involvement of the AMA Committee assures that the integrity of the extensive work of the CPT and RUC committees will not be jeopardized. While not as work intensive as those two committees, the Correct Coding Policy Committee will assure medical specialty societies that there will be more time for their review and comment on the proposed coding combinations. In addition, specialty society input will be reviewed in an organized and systematic manner before being presented to AdminaStar and HCFA. It is anticipated that the recommendations of the AMA committee will compliment and add additional credibility to the specialty societies concerns. For more information, see "New Medicare Correct Coding Combinations" in the Feb. 1996 *Medicine in the News* section of *The Journal*. *Information provided by the AMA FED-NET.*

New Report on Tobacco Use in Arkansas

A government report released recently on tobacco use in states ranks Arkansas 44 in percentage of adult smokers and 35 in tobacco related deaths. More than 26.6% of adults 18 and older in Arkansas smoke, compared to a national average of 23%.

The report shows the state spends \$296 million in direct medical costs related to smoking and loses an average of 12.5 years of potential life for each death due to smoking.

Youth smoking rates in the state were significantly higher than those of adults. Arkansas came in at 18 on cigarette smoking among youth in grades 9-12. Almost 31.3% of the youth smoked in the past month; about 4.7% higher than adult rates. A University of Michigan study released recently showed smoking among teens has increased to the highest level in 16 years.

"This report clearly shows the tragic toll tobacco takes on Arkansas, particularly our children," said Dr. David Bourne, Medical Director, Preventive Health Section of the Arkansas Department of Health. The youth rates emphasize that smoking is a pediatric disease.

Nearly all adult smokers began smoking as children. The average smoker began at age 14 and became a daily smoker by 14.5 years. "With 3,000 children starting to smoke every day, it is easy to see how nicotine

addiction among youth has reached such startling proportions," said Betty Herron, Executive Director of National Family Partnership of Arkansas (the Red Ribbon Campaign).

The Tobacco Free Arkansas Coalition, comprised of many groups including the American Cancer Society, the American Lung Association, the American Heart Association, the Arkansas Department of Health, and National Family Partnership of Arkansas, feels we need strong measures to reduce youth smoking rates. It also sends a signal to Congress for the need to support the FDA proposal which if enacted would do a great deal to curtail tobacco advertising and marketing to children.

The state Tobacco Control Highlights-1996 report, developed by the Centers for Disease Control and Prevention (CDC), is the first time state-based data for all 50 states and the District of Columbia has been compiled in one source. The report looks at the prevalence of tobacco use, tobacco's health impact and costs, tobacco control legislation, tobacco agriculture and manufacturing, and tobacco use prevention and control programs.

See related charts and graphs on the following two pages. For more information on State Tobacco Control Highlights-1996 or about the Tobacco Free Arkansas Coalition, call 501-661-2783.



We put ourselves to the test 348,000 times a day.

With every test, we realize that your reputation—and patients' lives—depend on what we do. That's why we bring together innovative technology, dedicated people, and the highest quality standards (every tenth test is a quality control specimen). That's why we operate 23 major reference laboratories including four esoteric testing centers located across the country.

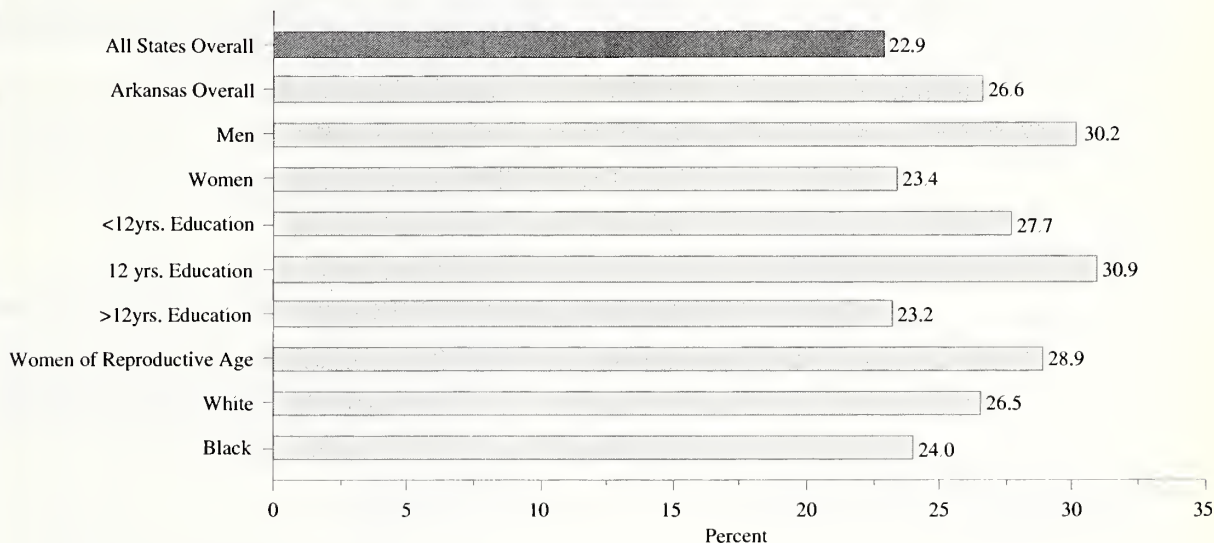


SmithKline Beecham
Clinical Laboratories

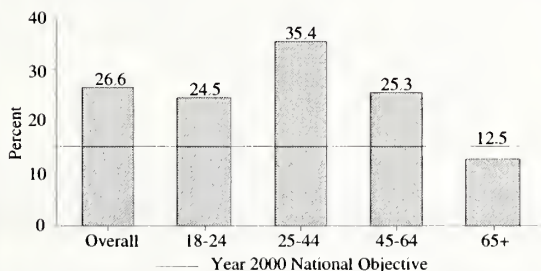
Currently, there are 463,900 adult smokers in Arkansas.

Tobacco Use in Arkansas

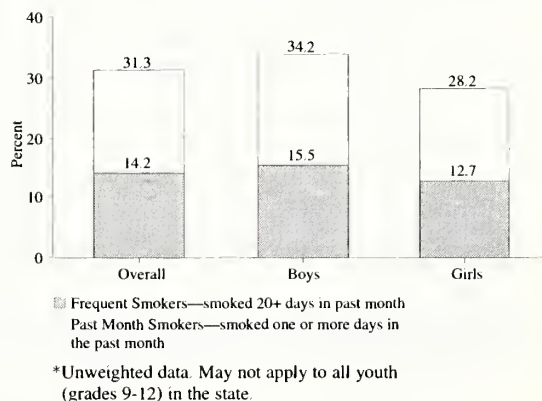
Current Cigarette Smoking Among Adults Aged 18 and Older, 1993



Current Cigarette Smoking Among Adults by Age, 1993



Past Month Cigarette Smoking Among Youth, Grades 9-12, 1993*



Health Impact and Costs, 1990

DEATHS RELATED TO SMOKING		YEARS OF POTENTIAL LIFE LOST*	DIRECT MEDICAL COSTS RELATED TO SMOKING	
Overall	4,706	58,742 years or an average of 12.5 years for each death due to smoking. *Calculated to life expectancy	Total	\$296,000,000
Men	3,410			
Women	1,296			
Death Rate	376.3/100,000			
Rank	35			
(No. 1 is lowest death rate)				

Smokeless Tobacco Use

CURRENT USE AMONG ADULTS AGED 18 AND OLDER, 1992-1993	PAST MONTH USE AMONG YOUTH, GRADES 9-12, 1993*
All States 2.1%	All States 11.5%
Arkansas 6.2%	Arkansas 14.5%
Men 11.1%	Boys 26.2%
Women 1.9%	Girls 2.4%
	*Unweighted data. May not apply to all youth (grades 9-12) in the state.

However, another 441,300 adults in Arkansas have quit smoking.

Tobacco Control Legislation, 1995

Excise Tax

Cigarette tax per pack 31.5¢
Rank = 26 (No. 1 is highest tax)

Federal and state taxes as a
percentage of retail price 33.2%

Annual net tax revenue
from cigarettes \$78,256,000

Smokeless tobacco tax:
23% of manufacturer's selling price.

Minors' Access to Tobacco Products

Minimum age for sale: 18

Illegal for minors to purchase, possess, or use: No

Restrictions on Vending Machines

Vending machines must be located where minors
cannot access them, unless machines are supervised.

Signage

Signs required on premises and affixed to vending
machines.

Licensure

Retail license and vending machine license required.

Penalties

Penalties to business owner, manager, or clerk.

Revocation/suspension of license for violation.


State Preempts Local Laws

No preemption

Advertising

No restrictions

Smokefree Indoor Air

Site	Restrictions				Penalties	
	100% Smokefree	Designated smoking areas with separate ventilation	Designated smoking areas required or allowed	None	To businesses	To smokers
						
State govt. worksites				✓		
Private worksites				✓		
Restaurants				✓		
Day care centers	✓					
Grocery stores				✓		

Tobacco Economy

Tobacco Agriculture, 1994

Data points too small to be separately reported.

Tobacco Manufacturing, 1992

None

Tobacco Use Prevention and Control Program

Funding: CDC IMPACT Program

Regional Network: Tobacco-Free Heartland

Contact

Joy Rockenbach, Arkansas Department of Health, Office of Tobacco Control and Prevention
4815 W. Markham, Little Rock, AR 72205

Phone: 501-661-2783 Fax: 501-661-2082 Internet Address: rock100w@wonder.em.cdc.gov

UPDATE: Newborn Screening for Galactosemia

Robert West, M.D.*

James B. Gibson, M.D., Ph.D.**

Screening of all newborns for galactosemia commenced in Arkansas on January 2, 1996. An article in last month's issue of *The Journal* discussed the rationale for screening and provided information on cutoff values and follow-up actions. However, since that article went to press, the Department of Health has raised the cutoff value for total galactose to 10mg/dL. This change was necessary due to the unacceptably (and unexpectedly) high number of "partial positive" results obtained using the initial cutoff of 9 mg/dL. Over 90 such results were obtained during the first two months of testing, in addition to five "positive" results. As of early March, follow-up testing of partial positive results has been normal in every case. Follow-up of positive results has uncovered one possible Duarte-galactosemia compound heterozygote and two probable carriers, with follow-up still pending for the other two.

Reasons for the large number of partial positive results remain unclear, particularly since preliminary trials of the screening method failed to yield a single galactose result of greater than 9 mg/dL. Regardless, one factor known to produce factitious elevations of total galactose involves layering of the blood spot collected on the filter paper. Meticulous attention to recommended specimen collection procedures may therefore reduce false positives.

Also, timing of the heelstick with respect to feeding is likely a factor in some cases. It is known that blood galactose levels peak about 45 to 60 minutes after feeding. Trough levels occur just prior to feedings, making this the optimal time to obtain the newborn screening specimen.

The table below reflects the revised galactose cutoff value as well as modification of the recommended action for partial positive results. Change to lactose-free formula for infants having partial positive results is now recommended only if they show symptoms or have a positive test for urinary reducing substances. Further adjustments to the screening protocol may be necessary in coming months as additional experience is gained. These changes will be reported in *The Journal* as they occur.

TABLE

Galactose (mg/dL)	GALT (U/gHb)	Specimen Integrity Interpretation	Action	
<10	>3.5	—	Presumed normal	(a)
<10	≤3.5	Unacceptable	Inconclusive	(b)
10 - 15	>3.5	—	Partial positive	(c)
10 - 15	≤3.5	Unacceptable	Partial positive	(c)
Any	≤3.5	Acceptable	Positive screen	(d)
>15	Any	Either	Positive screen	(d)
a) None				
b) Filter paper repeat				
c) Filter paper repeat; institute lactose-free formula if infant symptomatic or urine positive for reducing substances				
d) Whole blood (for GALT and gal-1-P) and urine; lactose-free formula pending results				

For further information about galactosemia screening, Dr. bob West at the Department of Health may be reached at 661-2757. For consultation regarding follow-up of positive results, Dr. James Gibson, metabolic geneticist at Arkansas children's Hospital, is available at 320-2966.

* Dr. West is Pediatric Consultant at the Arkansas Dept. of Health.

** Dr. Gibson is Assistant Professor, Arkansas Genetics Program, UAMS Dept. of Pediatrics/Arkansas Children's Hospital.

AMS Newsmakers

Dr. Michael S. Bouton, a general surgeon in Fort Smith, recently received a three-year appointment as Cancer Liaison Physician for the Hospital Cancer Program at Sparks Regional Medical Center.

Dr. Vance Crain, a retired physician in Wynne, was recently named Citizen of the Year by the Wynne Chamber of Commerce.

For ten years, **Dr. Richard Duke**, a resident at UAMS, has been collecting and shipping medical books, mostly college text books, to schools, medical clinics, and college's in Africa. He sends whatever he can gather from whoever doesn't need heavy text books lying around their houses or offices. In the last decade, the books shipped to Zambia schools totaled more than 12 tons.



*Robert H. Fiser Jr., M.D.
with his mother.*

A street in Morrilton has been named in honor of **Dr. Robert H. Fiser Jr.**, a Little Rock pediatrician. He is a native of Morrilton and assistant vice chancellor for Regional Programs to the Area Health Education Centers. *Fiser Drive* is located east of Hospital Drive, between the Morrilton Medical Clinic and the Riverview Nursing Home.

Physician's Recognition Award

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of February 1996 are:

James M. Parker
James B. Russell
Charles P. Sisco
Norman I. Snyder

Little Rock
Conway
Springdale
Fayetteville



*Maj. Gen. Walter John
Giller Jr., M.D.*

Major General Walter John Giller Jr., M.D., an orthopedic surgeon in El Dorado, has been appointed a top job in United States Air Force Reserve medicine. In his new position as Air Force Reserve Mobilization Augmentee to the Surgeon General of the Air Force, he will be responsible for overseeing all matters concerning medical personnel in the Air Force Reserve. He will also assume the duties of Deputy Surgeon General for Air Force Reserve Affairs.

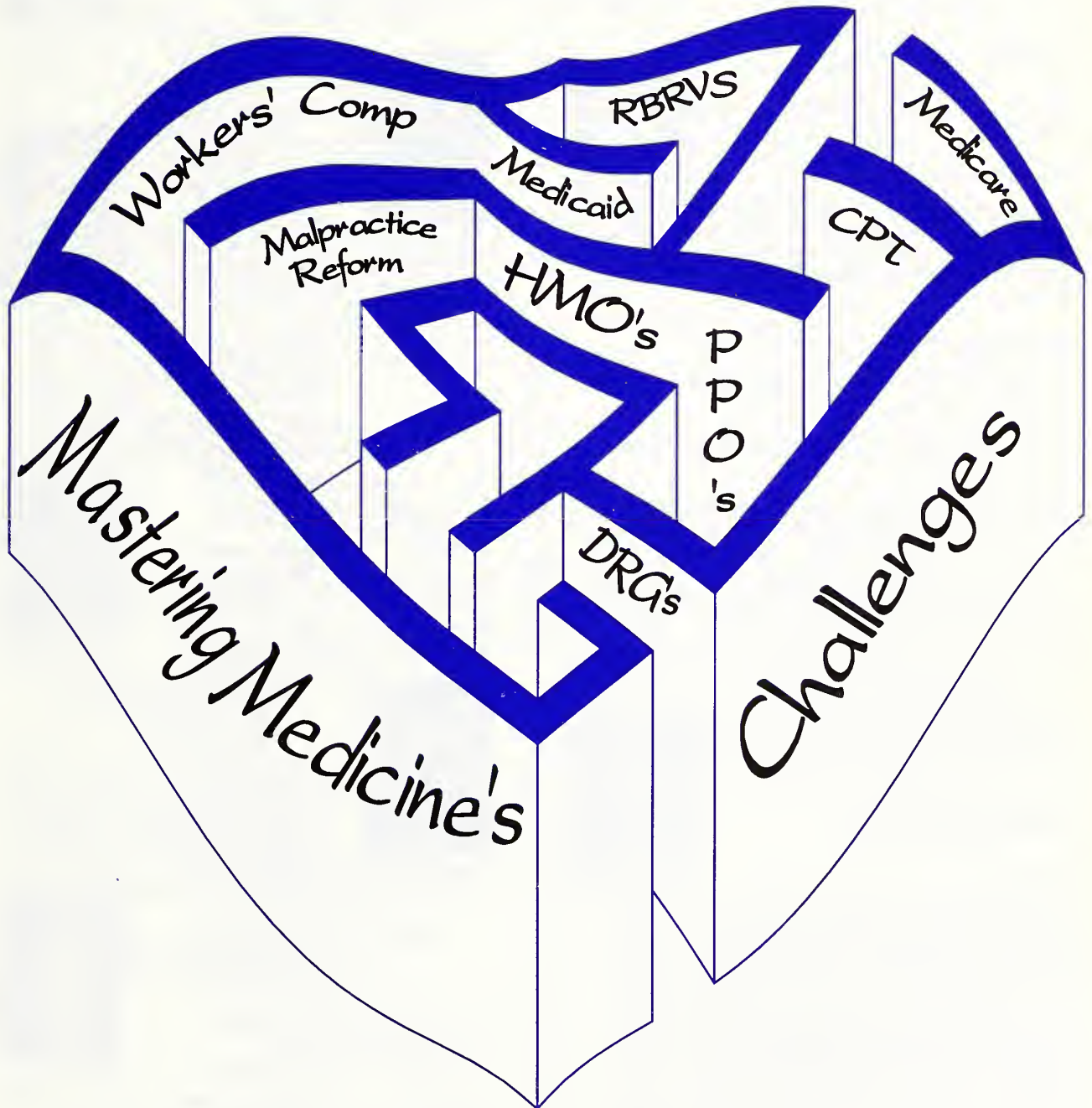
Dr. J. Thomas Turley, a Rogers Urologist, along with 14 other physicians from throughout the U.S., is participating in an FDA study to gather information on a remedial device for a common male problem. The study will determine the overall effectiveness of a few specific types of penile implants, which are used to treat impotence caused by organic (physical) conditions.

In February, **Drs. Evan S. Cohen, James A. Ameika, and Michael L. Isaacson**, who specialize in cardiology and cardiovascular surgery in Jonesboro, helped kick-off the month-long 1996 Neighbor To Neighbor Heart Association Campaign which was designed to distribute educational information to area residents as well as give them an opportunity to make a monetary contribution to the American Heart Association.

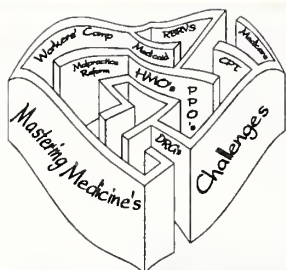


Arkansas Medical Society
1996 Annual Convention

REGISTER TODAY!



Excelsior Hotel/Statehouse Convention Center
May 2 - 4, 1996 Little Rock, Arkansas



May 2-4, 1996

Excelsior Hotel/Statehouse Convention Center

Target Audience

This meeting is designed primarily for Arkansas physicians concerned with health care issues that affect the practice of medicine. Clinic managers, medical students, residents and other health care professionals will also benefit from this program.

Program Objectives

- *Give health care professionals the opportunity to network and exchange ideas.
- *Update attendees on the trends, perspectives and challenges of health care reform.
- *Explain the structure of medical practice within the managed care environment to include contracting, patient access and coordinating of medical needs.
- *Provide health care professionals with current and useful information about Hepatitis A, Tuberculosis, HIV and AIDS.
- *Identify the most common causes of medical malpractice and how to avoid them.
- *Update health care professionals in regard to full disclosure of patient and physician rights under managed care contracts.
- *Demonstrate the importance of personal involvement in the political process.

CME Hours

St. Vincent's Infirmary Medical Center is accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. St. Vincent's Infirmary Medical Center designates this continuing medical education activity for 6.5 credit hours in Category I of the Physician's Recognition Award of the American Medical Association. This program has been reviewed and is acceptable for 6.25 Prescribed hours by the American Academy of Family Physicians. AAFP Prescribed credit is accepted by the AMA as equivalent to AMA PRA Category I for the AMA Physician's Recognition Award. When applying for the AMA PRA, Prescribed hours earned must be reported as Prescribed hours not as Category I.

Thursday, May 2, 1996

9:00 a.m. **Golf Tournament**
Greystone Golf Club, Cabot
Co-sponsored by ARORA, Healthsouth
Rehabilitation Corporation and
Schering Corporation

1:00 p.m. **Registration Opens**

1:00 p.m. **Seminar for Young Physicians
"Staying Out of Court"**



William Starkey
Little Rock, AR

Overton S. Anderson
Anderson & Kilpatrick
Little Rock, Arkansas
William C. Starkey Jr., CIC
The Medical Protective Company
Little Rock, Arkansas
*An educational grant given by
Professional Consulting Services*

Overton S. Anderson is the senior partner of the law firm of Anderson & Kilpatrick in Little Rock, Arkansas. He specializes in the defense of medical malpractice cases. Mr. Anderson has practiced law in Little Rock since 1973.

William C. Starkey Jr has been in the malpractice insurance business for over 25 years and is the representative for the State of Arkansas for The Medical Protective Company. He manages the defense strategy for physicians who have been sued. He conducts risk management seminars for various groups.

2:00 p.m. **Council Meeting**

3:30 p.m. **Welcome Reception**

Exhibits Open
Sponsored by Boatmen's National
Bank of Arkansas

5:00 p.m.

House of Delegates

Keynote Speaker



Lonnie Bristow, MD
San Pablo, CA

Lonnie R. Bristow, MD, President
American Medical Association
San Pablo, California

Dr. Lonnie R. Bristow has been a member of the AMA Board of Trustees since 1985. Before his election to the Board, he served as a delegate to the AMA from the American Society of Internal Medicine. Dr. Bristow is a diplomate of the American Board of Internal Medicine and a master of the American College of Physicians.

7:00 p.m.

Wall Street Party

Co-Sponsored by Blue Cross Blue Shield of
Arkansas and Southern Medical Association

Friday, May 3, 1996

7:30 a.m. **Council Meeting**

9:00 a.m. **Continental Breakfast**

Exhibits Open
Sponsored by First Commercial Bank

9:30 a.m. **Reference Committee Meetings**

Convention Schedule

10:45 a.m.

First Feature Session

"A Patient's Right to Know . . . Curbing the Abuses of Managed Care"

The Honorable Bill Kennemer
Oregon State Senator
Milwaukie, Oregon
Renee Paper, RN, Board Member
Citizens for the Right to
Know Coalition
Henderson, Nevada
*An educational grant given by
The St. Paul Companies*



The Honorable
Bill Kennemer
Milwaukie, OR

Senator Bill Kennemer was elected to the Oregon State Senate in 1987. He sponsored the Patient Protection/Full Disclosure Act. He is Chairman of the Business & Consumer Affairs, Co-Chair of the Joint Committee on Information Management and Technology, Vice Chair of the Trade & Economic Development and is a member of the Health & Human Services Committee. He has a private practice in Clinical Psychology.

Renee B. Paper, RN, CCRN, is Program Director for the Hemophilia Foundation of Nevada. She is the Founding Board Member of the Citizens For the Right To Know Coalition and the Hemophilia Foundation of Nevada. She comes from a background of nursing where since 1994 she has been a triage nurse in the emergency department.



Renee Paper, RN
Henderson, NV

12:15 p.m.

Shuffield Lecture/Luncheon

"Personal Political Power"

Joel Blackwell
Issue Management Company
Cornelius, North Carolina
*An educational grant given by
Freemyer Collection System*



Joel Blackwell
Cornelius, NC

Joel Blackwell has worked as a consultant and trainer for associations since 1985. His presentation shows how to develop positive attitudes and enthusiasm for lobbying, politics and PACs; build long term relationships with elected officials; and deliver a concise, personal version of the association's message on issues.

1:45 p.m.

Afternoon Break

Exhibits Open

*Co-sponsored by National Park Medical
Center and Knoll Pharmaceutical Company*

3:00 p.m.

Second Feature Session

"Infectious Diseases: An Arkansas Focus"

Joseph M. Beck II, MD, Chairman
AMS Task Force on AIDS
Little Rock, Arkansas
Sandra D. Nichols, MD, Director
Arkansas Department of Health
Little Rock, Arkansas
William W. Stead, MD, Director
Tuberculosis Program
Arkansas Department of Health
Little Rock, Arkansas
*An educational grant given by
Roche Laboratories*



Joseph Beck II, MD
Little Rock, AR

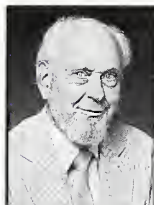
Dr. Joseph M. Beck II is an oncologist in private practice and is Chairman of the AMS Task Force on AIDS. Dr. Beck serves as Chief of the Department of Medicine for Doctors Hospital. He is Medical Director for St. Vincent



Sandra Nichols, MD
Little Rock

Infirmary Cancer Center and serves as Chairman of the St. Vincent Infirmary - Bloodborne Disease Committee. He is a member of the Arkansas Department of Health AIDS Advisory Committee.

Dr. Sandra B. Nichols has been Director of the Arkansas Department of Health since 1994. She is an Officer of the Department of Health and Human Services, Food and Drug Administration. Dr. Nichols is on Governor Jim Guy Tucker's Task Force on Health Care Reform, and she is on the Board of Directors of the Arkansas Chapter, National Committee for the Prevention of Child Abuse and Neglect.



William Stead, MD
Little Rock

Dr. William W. Stead is Director of the Tuberculosis Program at the Arkansas Department of Health. Dr. Stead has served as a consultant for TB control in prisons in Minnesota and New Jersey. He was a member of the Advisory Council for Elimination of TB for the Centers for Disease Control from 1987-1991. In 1988, Dr. Stead received the Edward Livingston Trudeau Medal from the American Thoracic Society and American Lung Association.

6:00 p.m.

Hospitality Hour

*Co-sponsored by American Investors Life
Insurance Company*

7:00 p.m.

Inaugural Banquet

Sponsored by AMS Benefits, Inc.

9:00 p.m.

President's Reception & Dance

Saturday, May 4, 1996

7:30 a.m.

Council Meeting (tentative)

8:30 a.m.

Early Morning Refreshments

*Co-sponsored by American Health
Care Providers, Inc.*

9:00 a.m.

Third Feature Session

"Managed Care: Confronting and Dealing With the New Realities"

Russell D. Harrington Jr., President
Baptist Health
Little Rock
Ellen A. Pryga, Director
Division of Policy Development
American Hospital Association
Washington, D.C.



Russell Harrington
Little Rock

Russell D. Harrington Jr. is a Fellow in the American College of Healthcare Executives (FACHE) and is a former past chairman of the Arkansas Hospital Association. He serves on Governor Tucker's Task Force on Health Care Reform and is a member of the Health Services Commission.

Ellen A. Pryga has worked for the American Hospital Association for more than 25 years. Currently, her work is focused on health care reform and the changing role of hospitals as they evolve into community-based health care delivery systems.

10:30 a.m.

House of Delegates

12:30 p.m.

Specialties & Committee Meetings

Dr. Harold Purdy Memorial Golf Tournament

Tee off the convention by bringing your clubs to the Greystone Golf Club in Cabot on Thursday, May 2 at 9:00 a.m. The tournament will be a 4-person scramble and USGA rules will prevail. **Contributions made by ARORA, Healthsouth Rehabilitation Corporation and Schering Corporation.**



Welcome Reception

Visit with your colleagues, spouses and exhibitors during the first exhibit time - just prior to the First House of Delegates and keynote address by Dr. Lonnie Bristow. **The reception is sponsored by Boatmen's National Bank of Arkansas.**

Wall Street Party

The sky's the limit when the Wall Street Party opens its doors. Play the market with AMS members, spouses, guests and exhibitors. Enjoy the good food, fun and atmosphere. Pool your winnings to bid on prizes offered at the evening's auction. *Dress is casual.* **Co-sponsored by Blue Cross Blue Shield of Arkansas and Southern Medical Association.**

Continental Breakfast



Enjoy breakfast while you visit with the 1996 exhibitors at their booths. Be sure to stop by every booth to qualify for the Grand Prize Drawing. **The breakfast is sponsored by First Commercial Bank.**

Afternoon Break

Take a break from the meetings to have fun and relax while visiting the exhibitors one last time. The Grand Prize will be drawn at this time . . . so make plans to be there! **Co-sponsored by National Park Medical Center.**

AMS Inaugural Banquet



Join us for a fabulous dinner and the installation of Dr. John Crenshaw of Pine Bluff as AMS President. The Inaugural Banquet will be followed by the President's Reception and Dance. **The Inaugural Banquet is sponsored by AMS Benefits, Inc.**

We Will See You There!

Other Activities

President's Club

Date and time of **The Presidents' Club** meeting is to be announced. The group consists of presidents and president-elects of the county, specialty societies and Arkansas Medical Society and AMS past presidents.

Fifty Year Club Luncheon

The Society will host a luncheon for **The Fifty Year Club** at 11:30 a.m. on Thursday, May 2, 1996 in the River Valley Room of the Excelsior Hotel.

Specialty Meetings

American College of Emergency Physicians, Arkansas Chapter, will meet on Saturday, May 4, 1996. Time and location to be announced.

Arkansas Academy of Family Physicians will meet at 12:30 on Saturday, May 4, 1996, to discuss *"Primary Care Coalition."* Lunch reservations are necessary. The cost per physician is \$15.00. Contact the Academy Office at 223-2272 or toll free 1-800-592-1093 for reservations.

Arkansas Pathology Society will meet from 12:30 p.m. to 2:30 p.m. on Saturday, May 4, 1996, in the LaSalle Room of the Excelsior Hotel.

AMS Alliance Meeting Schedule

Thursday, May 2, 1996

- 2:00 p.m. Pre-Convention Board Meeting
- 3:30 p.m. Welcome Reception
- 7:00 p.m. Wall Street Party

Friday, May 3, 1996

- 7:30 a.m. Past Presidents' Breakfast
- 8:30 a.m. Continental Breakfast
- 9:00 a.m. Alliance Opening General Session
- 10:45 a.m. AMS First Feature Session
- 12:15 p.m. Shuffield Lecture & Luncheon
- 2:00 p.m. Reconvene Opening General Session
- 6:00 p.m. AMS Hospitality Hour
- 7:00 p.m. AMS Inaugural Banquet
- 9:00 p.m. AMS President's Reception & Dance

Saturday, May 4, 1996

- 8:30 a.m. Early Morning Refreshments
- 9:00 a.m. Alliance Second General Session
- 12:00 p.m. Installation Luncheon & Awards
- 2:00 p.m. Post-Convention Board Meeting

Lonnie R. Bristow, M.D., President American Medical Association

Keynote Speaker/AMS House of Delegates

ARKANSAS MEDICAL SOCIETY ANNUAL SESSION
EXCELSIOR HOTEL/STATEHOUSE CONVENTION CENTER
MAY 2-4, 1996

Lonnie R. Bristow, M.D., President of the American Medical Association (AMA) is the keynote speaker at the Arkansas Medical Society annual convention at the opening House of Delegates on May 2, 1996. Dr. Bristow is an internist from San Pablo, California. Dr. Bristow has been a member of the AMA Board of Trustees since 1985. He served as vice chair from 1992-1993, chair from 1993-1994 and president-elect in 1994.

Before his election to the Board in June, 1985, Dr. Bristow served as a delegate to the AMA House of Delegates from the American Society of Internal Medicine. Dr. Bristow is a diplomate of the American Board of Internal Medicine and a master of the American College of Physicians.

His service in the professional community has been diverse. Dr. Bristow was appointed by the Surgeon General to serve on the Federal Interagency Committee on Smoking and Health in 1988, and appointed by the Secretary of Health and Human Services to serve on both the Center for Disease Control's HIV Prevention Advisory Committee and 1989 Quadrennial Advisory Council on Social Security.

Dr. Bristow had represented the AMA as a commissioner to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) from 1990 to 1993. He also served the AMA Education and Research Foundation as its secretary-treasurer and as its president.

Dr. Bristow has written and lectured extensively on medical science as well as on socio-economic and ethical issues related to medicine. He currently serves as a reviewer for the *Journal of the American Medical Association*.



Important Information

Meeting Registration . . .



Return your meeting registration form by April 24, 1996, with a check (sorry, no credit cards) made payable to Arkansas Medical Society or AMS:

*Arkansas Medical Society
P.O. Box 5776
Little Rock, AR 72215-5776*

Refunds prior to April 24, 1996 will be at the full amount. Refunds after April 24, 1996 will be charged a \$10 processing fee which will be mailed after the convention.

Spouses and Guests . . .

Spouses and guests are invited to attend the AMS annual convention for a registration fee of \$55. This allows access to all sessions, exhibit center and social activities.

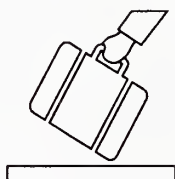


AMS Alliance Meeting . . .

The AMS Alliance Annual Session is meeting in conjunction with the AMS Annual Session. Please consult the registration form for the fees involved.

Hotel Reservations . . .

Hotel reservations can be made directly with the Excelsior Hotel. Hotel deadline is April 1, 1996. After that date, AMS convention rates cannot be guaranteed.



\$79 Single/\$89 Double

*Excelsior Hotel
Statehouse Plaza
Little Rock, AR 72201
(501) 375-5000*

Meeting Attire . . .

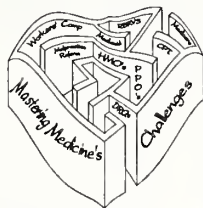
General sessions, education programs and other daytime activities - business attire, but dress comfortably. Wall Street Party - come casual - slacks and other casual wear. Dress up for the Inaugural Banquet and President's Reception & Dance.



Registration Form

Arkansas Medical Society

P.O. Box 5776
Little Rock, AR 72215-5776
(501) 224-8967
1-800-542-1058 (WATS)



Annual Convention

120th AMS Annual Session
May 2-4, 1996

Complete registration form following steps 1 through 6 and return by mail with check to the AMS office. Pick up tickets and badge at the AMS Registration Desk in the Statehouse Convention Center.

1 (Please Print) Dr. _____ This is my first convention _____

Spouse _____

Guest _____

Address _____

City _____ State _____ Zip _____ Phone _____

2 For appropriate meal count, please indicate the number of physicians, spouses and guests attending:

_____ #Attending Shuffield Luncheon _____ #Attending AMS Inaugural Banquet

Registration Fees	Pre-Paid	On-Site
Member	\$90	\$125
Past President	\$70	\$105
*Resident	\$5	\$10
*Medical Student	\$5	\$10
Spouse	\$55	\$70
Guest	\$55	\$70
Non-member	\$110	\$145

*Resident/student price does not include Inaugural Banquet Ticket.
Contact the Society office for reservations.

AMS Registration Includes:

- *Entrance into the Exhibit Center and Exhibit Center Breaks
- *CME Hours
- *Shuffield Luncheon
- *Social Events such as Wall Street Party and Inaugural Banquet and President's Reception & Dance

Note: Spouse fee does not include Alliance Luncheon

3 Young Physicians' Seminar

Member	\$10	\$15
Non-Member	\$20	\$25

Young Physicians' Seminar Includes:

- *Workshop materials & CME hours
- *Thursday's Exhibits

4 Dr. Harold Purdy Memorial Golf Tournament

Per person \$40

Please list handicap: _____

5 AMS Alliance Meeting

	Pre-Paid	On-Site
Member	\$20	\$25

AMS Alliance Registration Includes:

- *AMSA Meeting & Activities
- *Installation Luncheon

6 Did you add the appropriate amounts to include member, spouse, guest and alliance activities?

Total Amount Enclosed: _____

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FORREST CITY, AR - 14,000 Volume ED - 12 or 24 hour shifts. Generous remuneration package - need to be BE/BC in a primary care specialty with minimum of 2,000 hours EM EXP.

FT. LAUDERDALE, FL; CLEWISTON, FL; BELLE GLADE, FL; SEBRING, FL - All offering very generous remuneration packages and all of the amenities of a Florida lifestyle. Need to be BE/BC in a primary care specialty with minimum of 2,000 hours EM EXP.

CONTACT: DAVE MCLEOD

EMERGENCY CARE SPECIALISTS

1550 NE MIAMI GARDENS DRIVE, SUITE 504

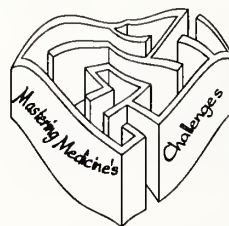
NORTH MIAMI BEACH, FL 33179

PHONE: 800-372-2600

FAX: 305-947-9990

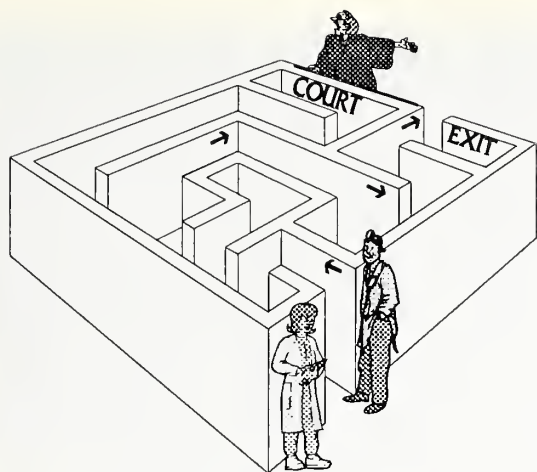
Register Today!

for
AMS Annual Session
May 2 - 4, 1996



**Excelsior Hotel &
Statehouse Convention Center
Little Rock, Arkansas**

Registration form on page 547



STAYING OUT OF COURT

Young Physicians Seminar

*In Conjunction With
Arkansas Medical Society 1996 Annual Session*

Thursday, May 2, 1996

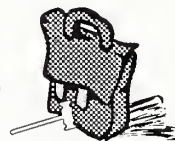
1:00 p.m. - 3:00 p.m.

Caraway Room Statehouse Convention Center
Little Rock, Arkansas

"**Staying Out of Court**," is targeted for young physicians, but all physicians or clinic managers are welcome to attend. This two hour session, held in conjunction with the Arkansas Medical Society Annual Session, will focus on mistakes physicians make that cause loss of practice time due to legal problems. An educational grant has been given by *Professional Consulting Services, Inc.*

What You Will Learn

- Clinical skills will almost always be the focal point of an allegation of negligence, however, results that are less than perfect or expected do not necessarily indicate negligence has occurred.
- Numerous actual case studies will be used to illustrate the fine line you must walk.
- Learn office procedures that will be helpful in building a strong defense, a position that will allow you to continue to practice medicine and stay away from the courtroom.



About the Instructors

William C. Starkey Jr, CIC has been in the malpractice insurance business for over 25 years and is the representative for the State of Arkansas for The Medical Protective Company. He manages the defense strategy for physicians who have been sued. He conducts risk management seminars for various groups.

Overton S. Anderson is the senior partner of the law firm of Anderson & Kilpatrick in Little Rock, Arkansas. He specializes in the defense of medical malpractice cases. Mr. Anderson has practiced law in Little Rock since 1973. He is licensed to practice law in Texas and in Arkansas and is admitted to practice in federal courts in both the Eastern and Western Districts of Arkansas, the Eighth Circuit Court of Appeals, and the United States Supreme Court.

CME Hours

St. Vincent's Infirmary Medical Center is accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. St. Vincent's Infirmary Medical Center designates this continuing medical education activity for 2 credit hours of Category I of the Physician's Recognition Award of the American Medical Association.

Registration Form

Please complete the form and return with payment to: Arkansas Medical Society, P.O. Box 5776, Little Rock, AR 72215-5776.

Registration Fee:	Pre-Paid:	\$10 Member	On-Site:	\$20 Member
		\$15 Non-Member		\$25 Non-Member

Name _____

Address _____ Phone _____

City _____ State _____ Zip _____

Refunds will be given if cancellation notice is received three days prior to the seminar.

Fifty Year Club Luncheon

The Society will host a luncheon for members of the Fifty Year Club at 11:30 a.m., Thursday, May 2, in the River Valley Room at the Excelsior Hotel in Little Rock. Physicians eligible for the Fifty Year Club this year are:

Lee G. Atherton, Hot Springs
Byron L. Brown, Fort Smith
Robert A. Calcote, Little Rock
Gilbert S. Campbell, Little Rock
Victor Carey, Jr., Heber Springs
Thomas DeClerk, Pocahontas
Milton D. Deneke, West Memphis
Kenneth R. Duzan, El Dorado
George J. Fotioo, Hot Springs
Charles N. Jones, Winthrop
W. Ernest King, Jr., Russellville

Robert L. McDonald, McGehee
W. Sloan Rainwater, Little Rock
S. William Ross, Little Rock
William W. Scott, Pocahontas
William L. Steele, Alexander
James R. Walt, Little Rock
Carl E. Wenger, Little Rock
Morton C. Wilson, Fort Smith
David M. Yocum, Jr., El Dorado
Robert R. Yoder, Mountain Home



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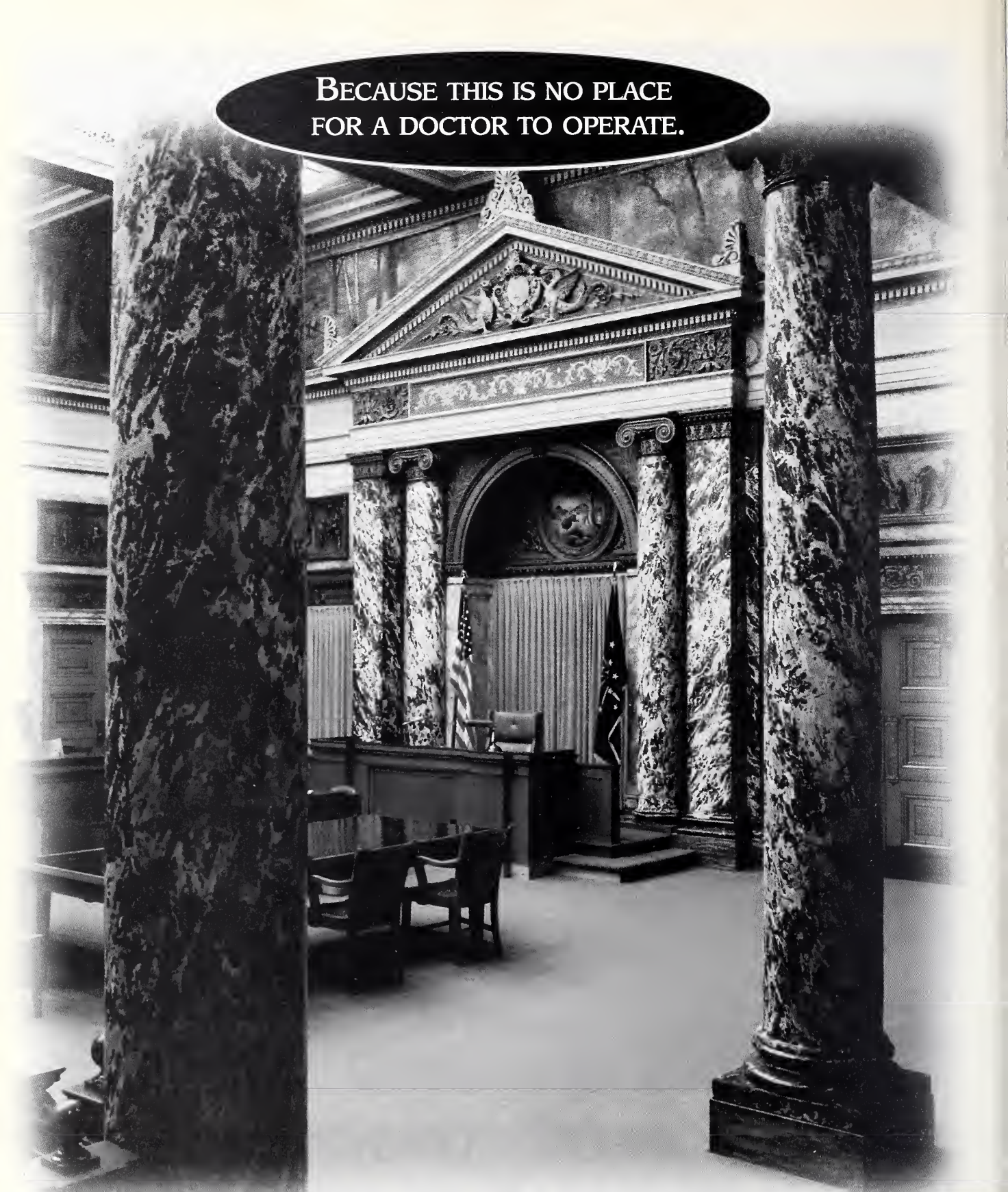
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1996 House of Delegates

The opening session of the House of Delegates of the Arkansas Medical Society will begin at 5:00 p.m. on Thursday, May 2. Speaker of the House Anna Redman, M.D., will preside. All items of business to be considered by the House must either be printed in the convention issue of *The Journal* or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during the session of the House of Delegates must have a two-thirds vote of attending delegates for introduction.

Items of business will be referred by the Speaker of the House of Delegates to one of two reference committees. Open hearings on those items of business will be held by the reference committees on Friday, May 3 at 9:30 a.m. All members of the Society are welcome to attend the meetings of the reference committees and to express views on the various reports, resolutions, etc.

The following will be seated at the House of Delegates meeting during the 1996 Annual Session:

Officers

Anna Redman, Pine Bluff, Speaker, (ex-officio)
Kevin Beavers, Russellville, Vice Speaker,
(ex-officio)
James Armstrong, Ashdown, President
(ex-officio)
John Crenshaw, Pine Bluff, President-elect
(ex-officio)
Joe V. Jones, Blytheville, Vice President
(ex-officio)
Mike Moody, Salem, Secretary (ex-officio)
Lloyd Langston, Pine Bluff, Treasurer
(ex-officio)

Councilors

District 1: Joe Stallings, Jonesboro
Dwight Williams, Paragould
District 2: Lloyd Bess, Batesville
Daniel Davidson, Searcy
District 3: Hoy B. Speer, Jr., Stuttgart
P. Vasudevan, Helena
District 4: John O. Lytle, Pine Bluff
Paul Wallick, Monticello
District 5: Wayne Elliott, El Dorado
Robert Nunnally, Camden
District 6: George Finley, Texarkana
Michael Young, Prescott
District 7: Robert McCrary, Hot Springs
Brenda Powell, Hot Springs
District 8: David Barclay, Little Rock
Joseph Beck, Little Rock
Paul Cornell, Little Rock
Anthony Johnson, Little Rock
William Jones, Little Rock
Charles Logan, Little Rock (Chair)
Jerry Mann, Little Rock
J. Mayne Parker, Little Rock
John L. Wilson, Little Rock

District 9: David Davis, Fayetteville
Robert Langston, Harrison
District 10: Gerald Stolz, Russellville
Paul Wills, Fort Smith
Morton Wilson, Fort Smith

Past Presidents (ex-officio)

A. E. Andrews, Jr., Texarkana
C. Stanley Applegate, Jr., Springdale
Glen F. Baker, Little Rock
John P. Burge, Lake Village
Asa A. Crow, Paragould
C. Randolph Ellis, Malvern
Ross E. Fowler, Harrison
Charles R. Henry, Sr., Little Rock
Morriss M. Henry, Fayetteville
John M. Hestir, DeWitt
William N. Jones, Little Rock
W. Ray Jouett, Little Rock
Albert S. Koenig, Jr., Fort Smith
James M. Kolb, Jr., Russellville
W. Payton Kolb, Little Rock
Kemal E. Kutait, Fort Smith
J. Larry Lawson, Paragould
Ken Lilly, Fort Smith
C. C. Long, Fort Smith (Honorary)
Joseph A. Norton, Little Rock
Ben N. Saltzman, Mountain Home
Purcell Smith, Jr., Little Rock
H. W. Thomas, Dermott
T. E. Townsend, Pine Bluff
George Warren, Little Rock
James R. Weber, Jacksonville
Charles F. Wilkins, Jr., Russellville
John P. Wood, Mena
George F. Wynne, Warren

Ex-officio members shall have the power of voting on all subjects except the election of officers.

Delegates for 1996 as submitted by county:

County	Delegate	Alternate Delegate			David Coussens Philip Deer, III Shirley DesLauriers Brad Diner Tom Eans Jim English Charles Fitzgerald Thomas Frazier Fred Henker Reid Henry Steve Hodges Tom Jansen Anthony Johnson Carl Johnson Gail Jones David King Dean Kumpuris Marvin Leibovich Steve Magie David Mumme Fred Nagel George Norton Carl Raque John Redman Ashley Ross Ted Saer Bruce Schratz Frank Sipes Kemp Skokos Duane Velez Samual Welch	Byron Curnter David Dean Gilbert Dean Gregory Dwyer Jay Flaming Eric Fraser David Gilliam A. Tharp Gillespie Michael Glidden James Hagler Ed Hankins Thomas Hart T. S. Harris Tim Hodges Jerry Holton Harold Hutson Ben Johnson Dianne Johnson John Jones Joan Kyle Jane McKinnon Keith Mooney Jim Morse David Mumme Michael Roberson Ian Santoro Claudia Tolleson
Arkansas (1) Ashley (1) Baxter (2) Benton (4) Boone (2)	Jim Crider Carlton Chambers	Sue Chambers				
Bradley (1) Carroll (1) Chicot (1) Clark (1) Cleburne (1) Columbia (1) Conway (1) Craighead/Poinsett (7) Crawford (1) Crittenden (2) Cross (1) Dallas (1) Desha (1) Drew (1) Faulkner (2)	Noland Hagood Jerry Thomas Thomas Pullig	Jim Ashabrunner John Alexander				
Franklin (1) Garland (6) Grant (1) Greene/Clay (1) Hempstead (1) Hot Spring (1) Howard/Pike (1) Independence (2)	G. Edward Bryant Robert Hayes	Willard Burks				
Jackson (1) Jefferson (5)	Randal Bowlin Ben Dodge	John Smith Philip Stone				
Johnson (1) Lafayette (1) Lawrence (1) Lee (1) Little River (1) Logan (1) Lonoke (1) Miller (3)	Roger Cagle	Darrell Bonner				
Mississippi (1) Monroe (1) Nevada (1) Ouachita (1) Phillips (1) Polk (1) Pope (3) Pulaski (38)	William Waldrip J. R. Baker	Jeff Angel Rick Van Grouw	Randolph (1) Saline (2)			
	Simmie Armstrong Sue Frigon David Jacks John Lytle George Roberson Richard McKelvey	Lee Tackett	Sebastian (12)			
	Brad Harbin Robert Quevillon	Ralph Joseph				
	Joe G. Shelton John R. Williams Leslie Anderson Joseph Robbins Herbert Wren Joe V. Jones	Joe Abrams F. E. Joyce Richard Hester	Sevier (1) St. Francis (1) Tri-County (1) Union (3) Van Buren (1) Washington (8)	Joe Martindale Don Harper Randy Ennen R. Cole Goodman Peter Irwin Greg Jones Robert Knox John Lange Jack Magness Eugene Still John Swicegood John Wells	Paul Anderson Jimmie Atkins Allen Beachy Mike Berumen William Holmes David Hunton David McClanahan Steve Nelson Claire Price Eric Taft	
	William Dedman Francis Patton	L. J. Pat Bell				
	William Ackerman D. B. Allen Ray Biondo Bob Cogburn Michael Cope	James Adamez Dana Abraham Brad Baltz Joe Buford Roger Clark	White (2) Woodruff (1) Yell (1) Medical Student	John A. Hall David Davis Anthony Hui Sanford Hutson William McGowan Michael Morse Danny Proffitt Mark Brown James Maupin Joel Milligan	Harry Starnes Gene Ring	

1996 House of Delegates

First Meeting, House of Delegates

5:00 p.m., Thursday, May 2

Anna Redman, M.D., Speaker

1. Call to order
2. Introduction of guests
Mrs. Susie Reeder, Chair, Membership Committee, American Medical Assoc. Alliance
Mrs. Sancy McCool, President-elect, Southern Medical Association Auxiliary
Mrs. Evelyn Thomas, President, Arkansas Medical Society Alliance, Heber Springs
Mrs. Ruth Mabry, President-elect, Arkansas Medical Society Alliance, Pine Bluff
3. Adoption of minutes of the 119th Annual Session as published in the June 1995 issue of *The Journal of the Arkansas Medical Society*.
4. Memorials
5. Presentations
6. Old Business
7. New Business
All reports, resolutions, and other items of business received by the headquarters office twenty days prior to the meeting shall be included in the agenda. Any items of business received after April 11th, must have two-thirds consent of attending delegates before introduction. All items will be referred to reference committees.
8. Announcement of vacancies on State Boards
Arkansas State Medical Board (First Congressional District)
Arkansas State Board of Health (First Congressional District and Member-at-Large Position)
9. Address by Lonnie R. Bristow, M.D., President, American Medical Association, San Pablo, California.
10. Recess until Saturday.

Final Meeting, House of Delegates

10:30 a.m., Saturday, May 4

Anna Redman, M.D., Speaker

1. Call to order
2. Election of officers. Nominations as submitted by the Nominating Committee:
President-elect: Charles Logan, M.D., Little Rock
Vice President: Jim Crider, M.D., Harrison
Treasurer: Lloyd Langston, M.D., Pine Bluff

Secretary: Mike Moody, M.D., Salem

Speaker of the House: Anna Redman, M.D., Pine Bluff

Vice Speaker of the House: Kevin Beavers, M.D., Russellville

Delegates to the AMA:

John Burge, M.D., Jacksonville
(1/1/97-12/31/98)

William Jones, M.D., Little Rock
(1/1/97-12/31/98)

Alternate Delegate to the AMA:

James M. Kolb, Jr., M.D., Russellville
(1/1/97-12/31/98)

John Hestir, M.D., DeWitt
(1/1/97 - 12/31/98)

Councilors:

District 1: Dwight Williams, M.D., Paragould
District 2: Daniel Davidson, M.D., Searcy
District 3: Parthasarathy Vasudevan, M.D., Helena

District 4: Harold Wilson, M.D., Monticello
District 5: Fred Murphy, M.D., Magnolia
District 6: George Finley, M.D., Hope
District 7: Robert McCrary, M.D., Hot Springs
Brenda Powell, M.D., Hot Springs

District 8: David Barclay, M.D., Little Rock
John Wilson, M.D., Little Rock
Bruce E. Schratz, Little Rock

District 9: Carlton Chambers, M.D., Harrison
William McGowan, Springdale

District 10: John Swicegood, M.D., Fort Smith
Gerald Stolz, M.D., Russellville

3. Address by the President of the Arkansas Medical Society, James Armstrong, M.D., Ashdown
4. Reports of Reference Committees #1 and #2
5. Supplemental report of the Council: Charles Logan, M.D., Chairman (Report covers meetings of the Council held during the annual session.)
6. New Business
Announcement of nominees for:
a) Arkansas State Medical Board
b) Arkansas State Board of Health
Other new business

State Board Vacancies

Arkansas State Board of Health

A vacancy will occur December 31, 1996, in the First Congressional District and the Member-at-Large position of the Arkansas State Board of Health. Members from the counties in the first congressional district and members of the AMS Nominating Committee, who vote on the Members-at-Large positions, are

urged to meet immediately following the adjournment of the House of Delegates on Thursday to vote for nominees. The term of office is four years. Nominations should be reported to the Society personnel immediately following the caucuses (only one nomination is required).

First Congressional District (as of 6/92): Dwight Williams, M.D., of Paragould is currently serving the term which will expire in December 1996. Dr. Williams is eligible to succeed himself.

Counties in the First Congressional District include Arkansas, Fulton, Clay, Cleburne, Craighead, Crittenden, Cross, Greene, Independence, Izard, Jackson, Lawrence, Lee, Lonoke, Mississippi, Monroe, Phillips, Poinsett, Prairie, Randolph, Searcy, Sharp, St. Francis, Stone, and Woodruff.

Member-at-Large: James Maupin, M.D., of Dardanelle, is currently serving a term as a member-at-large which will expire December 31, 1996. Dr. Maupin is eligible to succeed himself.

Arkansas State Medical Board

A vacancy will occur December 31, 1996, in the First Congressional District position of the Arkansas

State Medical Board. The term of office will be for eight years. Members from the counties in the old congressional district are urged to meet immediately following the adjournment of the House of Delegates on Thursday to vote for nominees. Nominations should be reported to the Society personnel immediately following the caucuses (only one nomination is required).

First Congressional District (old congressional district): Owen Clopton, M.D., of Jonesboro, is currently serving the term which will expire in December 1996. Dr. Clopton is eligible to succeed himself.

Counties in the First Congressional District include Clay, Craighead, Crittenden, Cross, Greene, Lee, Mississippi, Phillips, Poinsett, and St. Francis.

Council Meetings

The Council will meet at the following times:

Thursday, May 2	2:00 p.m.
Friday, May 3	7:30 a.m.
Saturday, May 4	7:30 a.m.

Nominating Committee

Carlton Chambers, M.D., Chairman

The Nominating Committee met by conference call on November 2, 1995. The committee met again on January 25, 1996. We wish to present to the Society the following nominees:

President-elect:

Charles Logan, M.D., Little Rock

Vice President:

Jim Crider, M.D., Harrison

Treasurer:

Lloyd Langston, M.D., Pine Bluff

Secretary:

Mike Moody, M.D., Salem

Speaker of the House:

Anna Redman, M.D., Pine Bluff

Vice Speaker of the House:

Kevin Beavers, M.D., Russellville

Delegates to the AMA:

John Burge, M.D., Jacksonville (1/1/97 - 12/31/98)

William Jones, M.D., Little Rock (1/1/97 - 12/31/98)

Alternate Delegate to the AMA:

James M. Kolb, Jr., M.D., Russellville

(1/1/97 - 12/31/98)

John Hestir, M.D., DeWitt (1/1/97 - 12/31/98)

Councilors:

District 1: Dwight Williams, M.D., Paragould

District 2: Daniel Davidson, M.D., Searcy

District 3: Parthasarathy Vasudevan, M.D., Helena

District 4: Harold Wilson, M.D., Monticello

District 5: Fred Murphy, M.D., Magnolia

District 6: George Finley, M.D., Hope

District 7: Robert McCrary, M.D., Hot Springs

Brenda Powell, M.D., Hot Springs

District 8: David Barclay, M.D., Little Rock

John Wilson, M.D., Little Rock

Bruce E. Schratz, Little Rock

District 9: Carlton Chambers, M.D., Harrison

District 10: John Swicegood, M.D., Fort Smith

Gerald Stolz, M.D., Russellville

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patients agree to in life, from going out to play to attending a special occasion, our commitment to comfort never waivers.

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1996 Reference Committees

Reference Committees

Reference Committees are appointed by the Speaker of the House of Delegates to consider the various reports and resolutions. Reports published in the April issue of *The Journal*, as well as any reports and resolutions presented at the first meeting of the House on May 2nd, will be referred by the Speaker to the reference committees. The committees will hold open hearings at 9:30 a.m. on Friday, May 3rd. After the opening hearings, the reference committees will hold executive sessions for the purpose of preparing recommendations and reports for the House of Delegates. Reports of the Reference Committees will be acted upon by the House of Delegates at the Saturday session.

Reference Committee Orientation

There will be a meeting of all reference committee members on Friday, May 3, at 9:00 a.m. The meeting will be to familiarize the reference committees with the rules, procedures, and writing of the reference committee reports.

Reference Committee Agendas

Reference Committee #1

9:30 a.m., Friday, May 3, 1996

David Jacks, M.D.
Reference Committee Chairman

AGENDA

1. Arkansas Academy of Family Physicians Resolution
Linda McGhee, President
2. Annual Session Committee
Jerry Mann, M.D., Chairman
3. Arkansas Medical Society 1996 Budget
Jerry Mann, M.D., Chairman
4. CME Accreditation Committee
Steve Strobe, M.D., Chairman
5. Report of the Council
Charles Logan, M.D., Chairman
6. Executive Vice President Report
Ken LaMastus, CAE, Executive Vice President
7. Physicians' Health Committee
Joe Martindale, M.D., Chairman
8. AMS Management Company, Inc.
Janell Mason, Chief Operating Officer

Reference Committee #2

9:30 a.m., Friday, May 3, 1996

Kim Graves, M.D.
Reference Committee Chairman

AGENDA

1. Ad hoc Committee on Managed Care
Glen Baker, M.D.
2. Medical Education Foundation for Arkansas
Martin Eisele, M.D., President
3. Medical Services Review Committee
Joe Stallings, M.D., Chairman
4. AMS Medical Student Section
Brian Meyer, President
5. Ouachita County Medical Society
Robert Nunnally, M.D., Secretary/Treasurer
6. Pulaski County Medical Society
Fred Reddoch, Executive Director
7. Arkansas Department of Health
Sandra Nichols, M.D., Director
8. Arkansas Health Care Access Foundation
Pat Keller, Director
9. Arkansas State Medical Board
Peggy Pryor Cryer, Executive Secretary

Business Reports

Reports for Reference Committee #1

Resolution from the Arkansas Academy of Family Physicians Concerning COLA's Accreditation Program for Laboratories

Whereas, the Commission on Office Laboratory Accreditation (COLA) is the only not for profit education and accreditation organization specifically designed to meet the needs of physician directed laboratories that are practice based and was founded by the American Academy of Family Physicians, the American Medical Association, the American Society of Internal Medicine, and the American Association of Pathologists; and

Whereas, the Commission on Office Laboratory Accreditation (COLA) is approved by the Health Care Financing Administration as an educational alternative to federal certification of laboratories under CLIA 88; therefore be it.

Resolved, that the Arkansas Medical Society endorse the accreditation program for laboratories of the Commission on Office Laboratory Accreditation; and be it further

Resolved, that the Arkansas Medical Society publicize information about the Commission on Office Laboratory Accreditation and encourage physicians to seek clinical laboratory accreditation through COLA as their peer review alternative to federal certification under CLIA 88.

Annual Session Committee Jerry Mann, M.D., Chairman

The theme for the Arkansas Medical Society 1995 convention was "Charting the Course." The meeting was held May 4-6, 1995, at the Arlington Hotel in Hot Springs, Arkansas. The first House of Delegates meeting was held on Thursday with Edward R. Annis, M.D., author of *Code Blue: Health Care in Crisis* and past president of the American Medical Association, serving as the keynote speaker. Dr. Annis addressed the issue of "Medical Practice in Turmoil: What Lies Ahead?"

The educational programs included "Battered Women Syndrome: Identifying & Treating Survivors" presented by Dr. Lenore E. A. Walker, "Evaluating Appropriateness of Care" by Barry Chaiken, M.D., and "Navigating Legislative Changes in the Practice of Medicine," an update on legislative activities by Lynn Zeno, Director of Governmental Affairs. Lee J.

Stillwell, Director of the AMA Washington office, was the featured speaker at the Shuffield Luncheon.

The Arkansas Medical Society is extremely grateful for the support of corporate sponsors and exhibitors. Over 70 companies were represented on Thursday and Friday. A casino party was enjoyed by all on Thursday evening, and physicians and guests attended a Blue Cross Blue Shield Reception on Friday.

The meeting concluded on Saturday with Thomas R. Reardon, M.D., Member of the AMS Board of Trustees, giving the keynote address at the final House of Delegates. Officers and councilors were also elected at this meeting. Dr. James Armstrong of Ashdown was inducted as the 1995-96 AMS President at the banquet on Saturday evening and honored at a reception and dance following the banquet.

Arkansas Medical Society 1996 Budget Jerry Mann, M.D., Chairman

	Amount Budgeted
Income	
Dues	725,630.00
Journal Advertising	91,000.00
Booth Income	37,000.00
Annual Session	37,000.00
AMA Reimbursement	12,000.00
Miscellaneous & Rosters	15,000.00
Interest Income	70,000.00
Specialty Desk	3,345.00
Continuing Medical Education	6,300.00
Allocation of GA Department	5,000.00
Educational Programs	30,000.00
TOTAL	\$1,032,275.00

Expenses	
Salaries	\$269,441.00
Travel & Convention	55,000.00
President's Account	6,000.00
Taxes	24,000.00
Retirement	30,400.00
Stationery & Printing	15,000.00
Office Supplies & Expenses	26,000.00
Telephone	11,000.00
Rent	79,672.00

Postage	30,000.00
Insurance & Bonds	50,000.00
Auditing	6,000.00
Council & Executive Committee	4,800.00
Journal & Directory Expense	76,500.00
Dues & Subscriptions	3,000.00
Gifts & Contributions	2,500.00
Alliance	8,700.00
Legal Services (retainer)	27,426.00
Special Committee	2,700.00
Public Relations	3,000.00
Miscellaneous Expenses	5,000.00
Office Equipment & Furniture	17,000.00
Continuing Medical Education	4,800.00
Richmond Early Retirement	5,820.00
Contract Labor	5,000.00
Winter Meeting	3,000.00
Resident & Student Section	6,000.00
Annual Session	71,000.00
Educational Programs	15,000.00
Physicians Health Committee	10,000.00
MEFFA - Dues	12,175.00
Managed Care	0.00
AMS Benefits-Expenses Owed	0.00
TOTAL	\$885,934.00

Governmental Affairs Budget

	Amount Budgeted
Income	
Dues	\$243,500.00
TOTAL	\$243,500.00

Expenses	
Salaries	\$107,000.00
Retirement	12,600.00
Taxes	8,500.00
Stationery & Printing	5,800.00
Office Sup, Telephone, Misc Exp	7,000.00
Equipment & Furniture	1,500.00
Auto, Travel & Meeting	40,000.00
Legal Retainer	18,300.00
Postage	8,500.00
Insurance & Bonds	9,000.00
Office Allocation To AMS	5,000.00
PPA Coalition	1,200.00
Audit	1,500.00
TOTAL	\$225,900.00

Continuing Medical Education

Accreditation Committee

Steve Strode, M.D., Chairman

The Arkansas Medical Society is the official accrediting body for organizations that provide or sponsor CME for physicians within the state of Arkansas. The Arkansas Medical Society was awarded continued recognition for a period of four years by the Accreditation Council for Continuing Medical Education (ACCME) on September 7, 1995.

The accreditation activities are carried out by the CME Accreditation Committee which currently consists of Drs. Sanford Hutson, Charles Mabry, Gerald Stolz, Morton Wilson, and myself. Kay Waldo and David Wroten of the AMS provide the administrative support necessary to fulfill our mission.

During the past year the committee reviewed two organizations, both hospitals, for reaccreditation. The results of those reviews were full accreditation for both hospitals for two years. One hospital was required to submit an interim report. One hospital voluntarily withdrew. A total of nine hospitals in Arkansas are accredited.

The accreditation organizations are required to submit an annual report every January. These are reviewed by the AMS staff and summaries are presented to the committee for approval.

The committee is in need of experienced surveyors or physicians interested in learning to conduct surveys. Usually no more than two or three surveys are conducted per year and each one takes approximately one-half day. The surveyors are paid \$100.00 per survey plus mileage. Committee meetings are held on an as needed basis, usually quarterly. Anyone interested in the CME accreditation program should contact David Wroten or Kay Waldo.

This concludes the report of the CME Accreditation Committee. My sincerest thanks to the committee members and staff for the hard work that they all contribute to this process.

Report of the Council

Charles Logan, M.D., Chairman

AMS Council:

The Council met on Sunday, February 19, 1995, at the Holiday Inn North in North Little Rock and the following items of business was received and transacted:

1. The Council approved the minutes of the January 25, 1995, Executive Committee meeting.
2. The Council approved the minutes of the November 20, 1994, Council meeting.

3. The Council approved Dr. Michael Young of Prescott to fill the vacancy in the Sixth Councilor District due to the resignation of Dr. John Gillean.
 4. Lynn Zeno gave an update of the activities of the Arkansas General Assembly. He discussed the Patient Protection Act which was passed by the Senate and will go to the House. He urged everyone to continue the hard work to get this bill passed. Lynn also discussed the Bottle Rocket Bill which prohibits the sale and use of bottle rockets. Dr. William Jones asked everyone to support SB 379 which prohibits smoking in public buildings.
 5. Dr. Charles Rodgers, Chairman of the Governmental Affairs Committee, informed the Council that the Political Action Committee did not reach its goal for 1994 and urged everyone to make their contributions.
 6. Dr. Jerry Mann, Chairman of the Annual Session Committee, reminded everyone to make plans to attend the annual meeting, May 4-6, at the Arlington Hotel in Hot Springs.
 7. Upon a recommendation from the Budget Committee, the Council approved \$15,000 to support Dr. William Jones in his campaign for a position on the AMA's Council on Scientific Affairs. Dr. Jones thanked everyone for their support.
 8. Nancy Kintzel greeted the Council and discussed the AMA's 1995 Legislative Agenda including the Medical Savings Accounts and the Patient Protection Act II which were outlined in the AMA's "Talking Points."
 9. Dr. Charles Rodgers explained the Ben Saltzman, M.D., Endowed Professorship in Rural Family Medicine at UAMS and urged everyone to contribute. Upon motion the Council approved a letter to be sent to the Medical Education Foundation for Arkansas to request a contribution to this fund.
 10. The Budget and Membership Reports were received for information.
 11. Dr. Charles Logan discussed the Shuffield Award and urged councilors to submit nominations prior to February 28.
 12. Dr. John Burge, Delegate to the AMA, gave a report on the AMA interim meeting that was held in Hawaii in December.
 13. Dr. Sandra Nichols, Director of the Arkansas Department of Health, updated the Council on the Department of Health issues and stated their goal was prevention.
 14. Mary Ann Stallings, President of the AMS Alliance, discussed Medical Alliance Month which is March. She explained pins would be distributed to physicians for domestic violence awareness and cards will be printed for distribution to doctors' offices for their patients.
 15. Dr. James M. Kolb, Jr., recommended the formation of a Presidents' Club. This group of AMS past presidents, county presidents, and specialty presidents would meet four times a year to exchange ideas and discuss issues of interest. This group would not serve as a governing body of the AMS but as a forum for increasing communication. Upon motion the Council approved the Presidents' Club as a three-year pilot project.
 16. Dr. Charles Logan discussed the AMA/Specialty Society RVS Update Committee commonly referred to as the RUC. The committee was charged with the responsibility for recommending physician work relative values to the HCFA for new and revised codes in the Physician's Current Procedural Terminology (CPT) in anticipation of a need to keep the payment schedule current.
 17. Dr. I. Dodd Wilson, Dean of the University of Arkansas College of Medicine, invited everyone to attend a dinner with the American Medical Association on April 24. He will contact the AMS with details which will be sent to the officers and councilors.
- The Council adjourned to reconvene into Executive Session. Minutes of Executive Sessions are available for review by any AMS member at the Society office.
- The Council met on Thursday, May 4, 1995, at the Arlington Hotel in Hot Springs and the following business was received and transacted:**
1. The Council approved the minutes of the February 19, 1995, Council meeting.
 2. The Council approved the minutes of the April 26, 1995, Executive Committee meeting.
 3. Mr. Mike Mitchell discussed the Patient Protection Act of 1995, also known as the Any Willing Provider Act. Lynn Zeno was recognized for his

work in helping get this act passed.

4. Dr. William Jones gave an update of his campaign activities for the position on the AMA Council on Scientific Affairs. Dr. Jones asked the Council to write their colleagues in other states and encourage them to support him in his campaign.
5. Upon motion the Council voted to write a letter to the Oklahoma Medical Society expressing sympathy for the recent bombing tragedy in Oklahoma.
6. David Wroten presented a \$53,333 check to the Council for payment of a loan that the Arkansas Medical Society made to the AMS Health Benefit Plan and gave an update on the recent changes since going to a fully insured plan March 1, 1995, through American Investors Life Insurance Company.
7. The Arkansas Medical Society Membership Report was presented for information.
8. The Arkansas Medical Society Budget Report was presented for information.
9. The Arkansas Medical Society audit was presented for information.
10. The Medical Education Foundation for Arkansas audit was presented for information.
11. Upon motion the Council voted to approve changes to the Arkansas Medical Society Alliance Bylaws.
12. Upon motion the Council voted to establish a Physicians Health Foundation to manage the money that will be distributed from the increase in physician licensure fees that was passed during the recent legislative session. This plan will then be presented to the Council for final approval.

The Council met on Friday, May 5, 1995, at the Arlington Hotel in Hot Springs and the following business was received and transacted:

1. Upon motion the Council approved a contribution equal to \$1.00 per each dues paying member to the AMA's State Medical Society Litigation Center.
2. Upon motion the Council approved a \$2,000 contribution to current Washington efforts for medical liability reform.
3. Nancy Kintzel of the American Medical Association greeted the Council and gave a brief update on their activities.

4. Upon motion the Council approved requests for dues exemption for life, emeritus, and affiliate membership.
5. The Council approved a motion for a letter be written to Robert Anderson, DDS, thanking him for his outstanding service to the Medical Services Review Committee.
6. Dr. Robert McCrary discussed problems surfacing in Garland County relating to managed care and relationships with the Arkansas Medical Society. Other Council members expressed concern relating to managed care issues. The Council approved the appointment of an ad hoc committee to work with the AMS staff to address meeting the needs and concerns of physicians involved in managed care.
7. Dr. Robert Fiser presented a model plan for a health care data system in Arkansas to address accessibility, accountability, and affordability. The Council directed Dr. James Armstrong to further investigate the project and report to the Council with more information.
8. The Council made the following appointments:

Budget Committee: Parthasarathy Vasudevan, Helena

Journal Editorial Board: UAMS Position, Alex Finkbeiner, Little Rock

Pension Plan Board of Trustees: Mayne Parker, Little Rock

Medical Education Foundation for Arkansas: reappointed Gerald Stolz, Russellville

Committee on Position Papers:

reappointed Dennis Jacks, Pine Bluff

Roger Cagle, Paragould, Chairman

David Davis, Fayetteville

Michael Young, Prescott

Young Physicians Committee:

Noland Hagood, Arkadelphia (District #7)

H. Jerrel Fontenot, Little Rock (District #8)

David Murphy, Russellville (District #10)

Medical Services Review Committee:

General Surgery: Pat Dolan, Hot Springs

Allergy: Kelsy Caplinger, Little Rock

Dermatology: Peter Singer, NLR

Otolaryngology: Graves Hearnberger, Little Rock

Ophthalmology: Richard Henry, North Little Rock

Radiology: James McDonald, Little Rock

MSRC Subcommittee of Subspecialties:

Cardiovascular Surgery: reappointed William Fiser, Little Rock

Gastroenterology: reappointed John Baber,
Little Rock

Oral Surgery: Edward Cooper, DDS, Hot
Springs

Physicians' Advisory Committee to Medicare:

Allergy: Kelsy Caplinger, Little Rock

Cardiovascular Diseases: reappointed
Anthony Bennett, Little Rock

Dermatology: reappointed Scott Dinehart,
Little Rock

Hematology: reappointed Tony Flippin,
Fort Smith

Oncology: reappointed Joseph Beck,
Little Rock

Otolaryngology: Graves Hearnberger,
Little Rock

Physical Medicine and Rehabilitation:
reappointed Barry Baskin, Little Rock

Radiology: reappointed John Joyce, Little Rock

Therapeutic Radiology: Loved Peacock,
Jonesboro

The Council met on Sunday, June 25, 1995, at the Holiday Inn West in Little Rock and the following business was received and transacted:

1. The minutes of the May 4-5, 1995, Council meetings were approved.
2. The Council approved the nomination of Dr. Anthony Johnson of Little Rock as the new eighth district councilor.
3. The Council approved the nomination of Dr. Daniel Davidson of Searcy as a second district councilor.
4. A vacancy in the fourth councilor district was discussed. No appointments were made.
5. Dr. Wayne Elliott of El Dorado who had previously resigned as a fifth district councilor was not able to attend the meeting, but notified the Council he would withdraw his resignation and continue to serve.
6. The Council approved the nomination of Dr. Jerry Byrum, a pediatrician from Little Rock, to serve on the Journal Editorial Board.
7. The Council discussed the resignation of Dr. John Crenshaw as chairman of the Medical Services Review Committee. Upon motion Dr. Joe Stallings of Jonesboro was approved to fill this position. Dr. Stallings has served as vice chairman of the MSRC. Upon motion the Council also voted for Dr. David Reding of Little Rock to replace Dr.

Stallings as vice chairman of the MSRC.

8. Lynn Zeno discussed a letter recently mailed to group administrators from Arkansas Blue Cross Blue Shield. The letter addresses a perpetual contract Blue Cross is asking groups to sign to avoid the impact of the Any Willing Provider legislation. Lynn informed the members a resolution has been drafted which asks for an investigation on the alleged attempt of Blue Cross to circumvent the Patient Protection Act by issuing new contracts.
9. Dr. William Jones gave an update on his campaign for a position on the AMA Council on Scientific Affairs. Dr. Jones was defeated but told the Council he felt Arkansas had been well represented. He thanked everyone for their support with special thanks to David Wroten, Lynn Zeno, and LeAnne Rogers of the AMS staff.
10. Dr. Charles Logan discussed the ad hoc committee which is to be appointed to address concerns on managed care. He asked for suggestions for physicians to serve on this committee and will proceed to make appointments.
11. Kay Waldo informed the Council of a recent CME site survey by the ACCME for reaccreditation. Ten hospitals in Arkansas are accredited by the Arkansas Medical Society. The results of the site survey are expected in September.
12. The Membership Report was accepted for information. Ken LaMastus informed the Council the Arkansas Medical Society had exceeded the budget on membership dues.
13. The Budget Report was accepted for information.
14. Dr. William Jones reminded everyone of the importance of MED-PAC and urged them to join the President's Club.
15. Dr. James Armstrong asked everyone to review the Med-Camps material recently sent to them and make a contribution to this worthwhile cause.

The Council adjourned to reconvene into Executive Session. Minutes of Executive Sessions are available for review by any AMS member at the Society office.

The Council met at noon on Sunday, October 29, 1995, at the Riverfront Hilton in North Little Rock and the following business was received and transacted:

1. The minutes of the June 25, 1995, Council meeting, the July 12, 1995, Executive Committee conference call, and the July 26, 1995, Executive Committee meeting were approved.
2. Information was received regarding the Medicare Conversion Factors under current law and the proposed House bill. The AMA Board of Trustees has endorsed this legislation. Under the House proposal the three current conversion factors for different kinds of physician services would be replaced by a single conversion factor.
3. Information was received regarding HealthSource conducting practice site surveys on all primary care physician offices beginning October 1, 1995. HealthSource has implemented these surveys as part of their initial credentialing and recredentialing process. Such surveys are required to meet NCQA standards.
4. Dr. Sandra Nichols, Director of the Arkansas Department of Health, discussed the Health Department's policies on workers with hepatitis. Instructions for reporting communicable diseases have been distributed to Arkansas restaurants. Other methods of education for restaurant employees are being considered. Public Service Announcements are also planned.
5. Upon motion the Council approved Dr. John Lytle of Pine Bluff to fill the vacancy in the Fourth Councilor District.
6. Upon motion the Council approved Dr. Michael Cope, an obstetrician/gynecologist from Little Rock, to fill the vacancy on the Medical Services Review Committee.
7. Dr. Glen Baker reported on the recently formed Ad hoc Committee on Managed Care. The committee felt there is a need to develop programs and obtain support from the Arkansas Medical Society. A recommendation was made to conduct a survey to determine physicians' involvement in managed care. Upon motion the Council voted for the committee to meet again and make further recommendations to the Council.
8. Dr. John Crenshaw reported that at the last MSCR meeting Dr. Adamson stated that four counties (Pulaski, Saline, Hot Spring, and Garland Counties) would be included in the Medicare HMO.
9. Dr. David Davis informed the Council of the group of physicians in Washington and Benton Counties who have raised \$400,000 to fund an initial development of a statewide physician owned health care financing corporation. The group is called Arkansas Physicians Health Plans, P.A. They have requested proposals from four national consulting firms for a feasibility study, a business plan, and a prospectus, and will have a public offering of stock. A representative of PROklahoma Care, a managed care company owned by Oklahoma physicians, also spoke. Upon motion the Council voted to empower the Executive Committee to investigate this and what relationship AMCO might develop with the northwest Arkansas HMO.
10. Mr. Mike Mitchell, AMS General Counsel, gave an update on the Patient Protection Act lawsuit. The case filed in Fayetteville has been transferred to Little Rock. A motion is pending to dismiss the Blue Cross case. The case will not be tried in the second week of November as previously scheduled.
11. Evelyn Thomas, President of the Arkansas Medical Society Alliance, gave an update on the Alliance's activities and presented a request for additional funding to hire an executive secretary. The Alliance is requesting an additional \$6,500 per year for a total AMS contribution of \$8,700. Upon motion the Council asked the Budget Committee to consider this request.
12. Dr. James M. Kolb, Jr., explained the need to establish a foundation to receive the \$20.00 increase in the State Medical Board licensure fees for the Physicians' Health Committee. Upon motion the Council approved the appointment of an ad hoc committee composed of Drs. Ray Jouett, Glen Baker, and Larry Lawson to develop a foundation and board of directors and report to the Executive Committee.
13. David Wroten explained the requirements by the Arkansas Workers' Compensation Commission for physicians to receive 12 hours of continuing medical education. The first three hours will be provided by the Workers' Compensation Commission and must be completed by June 30, 1996. The additional nine hours must be completed by December 31, 1996. The Arkansas Medical Society will work with the Workers' Compensation Commission to conduct seminars.
14. A resolution which the medical association of Maryland has asked the AMS to cosponsor entitled "National Physician Health Insurance Company" was presented. Maryland will submit the resolution at the AMA winter meeting. Upon

motion the Council voted to go on record as a co-sponsor of the resolution. (During the Executive Session a motion was made to reconsider the action of the Council. The Council voted to 1) contact Maryland to get more information about the resolution, 2) determine the support level of the resolution, and 3) discuss it with the Heart of America Caucus.)

The Council adjourned to reconvene in executive session. Minutes of executive sessions are available for review by any member at the Society office.

AMS Executive Committee:

The Executive Committee met on Wednesday, January 25, 1995, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

1. Dr. Mike Moody reported on the activities of the Arkansas Health Resource Commission and the desire of the Arkansas Foundation for Medical Care to be a part of the Health Information Data System. Concern was expressed that analyzing hospital admission abstracts should be done by organizations and individuals who are trained and experienced in this area. The only organization experience in this field in Arkansas is the Arkansas Foundation for Medical Care. The Executive Committee supports the AFMC activities in such a data group.
2. Mr. Roy Jeffus from Medicaid wanted to reschedule the utilization review meeting for 10:00 a.m. on February 22. The Executive Committee indicated they would not be in town at this time and it would cause a severe inconvenience for them. The Executive Committee suggested that Mr. LaMastus contact Mr. Jeffus to offer meeting on February 19 following the Council meeting. Dr. Mike Moody has agreed to assist the Executive Committee with the utilization review since he is a family physician experienced in obstetrics.
3. The Executive Committee reviewed information on the U. S. Pharmacopeial Convention March 9-12, 1995, in Washington, D.C. The U. S. Pharmacopeial will pay expenses for one delegate from Arkansas to attend the convention. The Executive Committee recommended that we offer this opportunity to the physician who is selected to serve on the Arkansas Drug Utilization Review (DUR) Board (see item #5).
4. The Executive Committee recommended Dr. J. Presley Jackson of Little Rock, Dr. Larry Battles of

Russellville, and Dr. Thomas Lewellen of Star City to serve on the Arkansas Drug Utilization Review (DUR) Board.

5. The Executive Committee accepted Dr. Randolph Ellis' desire to give materials to the Arkansas Medical Society for its historical archives. The Executive Committee authorized Dr. Kolb to sign the agreement containing stipulations. The Executive Committee suggested that a letter be written to Dr. Ellis expressing their appreciation of his willingness to contribute the materials to the Arkansas Medical Society.
6. The AMA National Leadership Conference will be held March 26-29 at the Hilton Hotel in Washington, D.C. Dr. James Kolb, Dr. James Armstrong, and Ken LaMastus will attend the conference. The Executive Committee suggested that one other physician be invited to attend the conference.
7. Dr. Logan reported on a concern by Dr. John Wilson, a member of the Council, regarding professional liability companies providing more information to managed care organizations and hospitals than was necessary for credentialing. Dr. Logan reported that we have received assurances from The Medical Protective Company, State Volunteer Mutual Insurance Company, and St. Paul Fire and Marine Insurance Company that through their policies no information is provided other than that pertaining to actual claims and, in many cases, they report only those filed in which payments have been made. Some of the policies have recently been altered to alleviate this problem.
8. The Executive Committee approved a list of physicians for direct membership in the Arkansas Medical Society.

The Executive Committee met on Wednesday, April 26, 1995, at the Arkansas Medical Society office in Little Rock and the following items of business were received and transacted:

1. A presentation was given by Dr. Fiser on the health data system he is working on in cooperation with several other individuals and organizations. The Executive Committee recommended he make the presentation to the Council during annual session.
2. The Executive Committee reviewed a plan for selecting members for the Arkansas State Board of Health. Legislation was passed earlier this year changing the districts from the old six congressional districts to four congressional districts.

3. The Executive Committee heard a report on the AMS Health Benefits Plan. The Plan will pay the Arkansas Medical Society \$50,000 of its \$100,000 loan in the next few days. The plan is now insured by American Investors. AMS Benefits staff will continue to perform some functions for the insurance group and be compensated. The Executive Committee, which is the AMS Board of Directors, along with three staff people reviewed a budget for AMS Benefits, Inc.
4. The Executive Committee approved a contribution to the AMA to support the State Medical Society Litigation Center. The amount of money to be contributed would equal \$1 for each dues paying member. It was pointed out that all the states are being asked to join the efforts and many have already done so. This would provide a system by which funds would be used along with \$250,000 from the AMA for their staff attorneys to enter lawsuits that pertain to the good of the profession.
5. The Executive Committee approved a \$2,000 contribution to the AMA for their efforts in Washington.
6. A list of physicians requesting direct membership in the Arkansas Medical Society was approved.
7. Information was provided on amending the Society's Pension Plan to comply with IRS regulations. There will be a meeting of the Pension Plan Trustees shortly after the annual session. Worthen Bank which has been bought by Boatmen's is the organization handling the plan. It is anticipated that Boatmen's will have some different investment vehicles to use and these will need to be reviewed by the Pension Plan Trustees.
8. The Executive Committee approved a request from Dr. Joe Martindale to charge physicians for using of the Physicians' Health Committee once they have returned to practicing medicine. The amount charged will be \$600 per year for nonmembers and \$300 for AMS members. Dr. Martindale recommended consultation with hospitals be performed for \$150 per hour plus expenses. This charge could be eliminated with a \$500 per year contribution to the Committee. Inquiries from insurance companies and hospitals would be charged \$50 per inquiry. Dr. Martindale will use his own discretion on charging physicians who may have financial problems.
9. The Executive Committee reviewed a proposal from IC System, a collection agency, asking for an endorsement by the Arkansas Medical Society. In

turn the Society would receive a small amount of funds. The Executive Committee did not feel comfortable with endorsing a collection agency and voted not to grant the endorsement.

The Executive Committee met by conference call on Wednesday, July 12, 1995, and the following business was transacted:

1. The Executive Committee heard a review of the recent lawsuit filed by Arkansas Blue Cross Blue Shield against a variety of organizations and institutions including one physician and his clinic in Forrest City, a physician's surgical center in Pine Bluff, an optometrist, a chiropractor, and two hospitals. Mike Mitchell reported that the two hospitals had hired Harold Simpson as legal counsel. The optometrist has also hired Phil Kaplan as his legal counsel. It should be noted that the optometrists had a separate piece of legislation.
2. Mike Mitchell pointed out the sole reason for filing this lawsuit was to have the recent legislation entitled "The Patient Protection Act" ruled invalid.
3. Mike Mitchell said the points on the lawsuit involved ERISA and due process consideration under the 14th Amendment of the U. S. Constitution. Mr. Mitchell indicated he felt we had a better than 50% chance of winning the lawsuit. He also indicated there would a meeting with the other two attorneys involved in the suit on Thursday and that they were discussing working together to hold down legal expenses. The Executive Committee asked Mr. Mitchell what he would estimate the lawsuit to cost. Mr. Mitchell estimated the cost as approximately \$100,000 and anticipated that whoever lost the suit would appeal it to a higher circuit court and possibly to the Supreme Court. He indicated the approximate cost at the district level (Little Rock) would be \$50,000.
4. There were discussions on several topics and information that the Executive Committee wanted reported back to them:
 - * Since this was an effort to repeal a state law, would the attorney general of Arkansas be involved in the case.
 - * The opinions of the other groups involved in the lawsuit.
 - * If the other groups involved in the lawsuit would make some financial contributions toward the cost. (There has already been a meeting of several of

the provider groups involved including podiatrists, chiropractors, pharmacists, hospitals, and physical therapists. The physical therapists, pharmacists, podiatrists, and osteopaths were not named in the lawsuit).

* They asked if the AMA would want to be involved in this lawsuit through its litigation center.

5. Mike Mitchell will try to obtain an extension past the July 25 deadline.
6. The Executive Committee discussed requesting contributions from AMS members.
7. The Executive Committee asked that we notify the Council and the Budget Committee of their unanimous approval to be a part of this lawsuit. The Committee asked that the Council members be notified that we would need an emergency meeting of the Council, conference call, or polling for permission to expend funds.

The Executive Committee met on Wednesday, July 26, 1995, and the following business was received and transacted:

1. The Executive Committee briefly discussed a letter from Dr. David Davidson of Fayetteville pertaining to physicians in northwest Arkansas interested in starting a HMO. This matter was referred to the AMS Management Company board of directors which met following the Executive Committee meeting.
2. The Executive Committee discussed a letter from the AMA's Council on Ethical and Judicial Affairs concerning the membership of Dr. George H. Collier of Paragould. The Executive Committee, after being made aware of Dr. Collier's medical condition, decided not to take any action. They further recommended this information be forwarded to the AMA's Council on Ethical and Judicial Affairs.
3. The Executive Committee recommended that any requests for reinstatement of AMS membership after a physician's license has been revoked be referred to the Executive Committee for approval. AMS membership is automatically suspended when one's license is revoked.
4. The Executive Committee reviewed the AAA Model that is being headed by Dr. Robert Fiser. Dr. Armstrong stated that he would prefer not to be on the board as president of the Arkansas Medi-

cal Society. He will be involved with the new organization and will keep the Arkansas Medical Society informed.

5. The Executive Committee, based on the recommendation of their county medical societies, approved Leah S. Campbell, Pulaski County, and Edward Doyle, Crawford County, for affiliate membership.
6. The Executive Committee approved Dr. George Stroope of Pulaski County for emeritus membership based on information from the Pulaski County Medical Society.
7. The Executive Committee approved a list of physicians requesting direct membership in the Arkansas Medical Society.
8. Dr. Charles Logan discussed the Committee on Managed Care. Dr. Warren Skaug, a pediatrician in Jonesboro, and Dr. Rick Harrison, a pediatrician in Russellville, were recommended to serve on the committee.
9. Dr. John Crenshaw discussed a meeting that took place earlier in the day concerning the annual session. Dr. Crenshaw requested that the suggestion of having the 1997 annual meeting in Memphis be referred to the Council. It was further recommended that the Inaugural Banquet be held on Friday evening instead of Saturday evening.
10. A report on the lawsuit Blue Cross Blue Shield filed pertaining to the Patient Protection Act (Any Willing Provider) was provided by Ken LaMastus and Lynn Zeno.
11. The Executive Committee recommended that the members of the AMS Council be polled for 1) their approval/disapproval of spending up to \$100,000 to fight the lawsuit Arkansas Blue Cross Blue Shield filed pertaining to the Patient Protection Act (Any Willing Provider) and 2) their preference to having a Council meeting or conference call to discuss the expenditure.

The Executive Committee met on Wednesday, October 25, 1995, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

1. Information was provided to the Executive Committee about the PROklahoma Insurance Company. It was noted that a representative from this company and Dr. David Davis will be at the next Coun-

cil meeting to explain the PROklahoma program and efforts by physicians in northwest Arkansas to start their own insurance company.

2. The Executive Committee briefly reviewed a telephone service that would allow physicians to dictate lab and x-ray reports and patients could obtain this information by calling a 1-800 number. The opinions of the members present were that this is something the Arkansas Medical Society should not attempt to market.
3. A list of physicians requesting direct membership to the Arkansas Medical Society was approved.
4. Mr. David Wroten gave a report on the Patient Protection Act lawsuit.
5. A letter that will be mailed to all AMS members requesting financial assistance with the Patient Protection lawsuit was discussed. The Executive Committee gave its approval of the letter to be signed by Dr. James Armstrong, President of the Arkansas Medical Society. It was mentioned that other associations involved with the lawsuit are sending a similar letter to their members.
6. The Executive Committee gave their approval for Arkansas Medical Society Benefits, Inc., to market disability insurance provided through Paul Revere Insurance Company. Paul Revere Company is one of the few companies left offering specialty specific disability insurance.
7. Dr. John Crenshaw discussed the results a survey regarding annual sessions being held outside of Arkansas. This survey was sent to AMS members who attended the last two annual sessions. He mentioned that the president's inauguration will be held on Friday night this year instead of Saturday night.
8. Dr. James Kolb provided information on the AMS Management Company. Dr. Kolb pointed out this information has been provided to the Budget Committee and they are waiting to hear from the AMCO Board of Directors before making any decisions. It was the opinion of the Executive Committee, which for the most part is the Board of Directors for AMCO, that the Budget Committee would recommend continuing to provide loans to AMCO up to the amount originally agreed upon which was \$200,000.

The Executive Committee met on Wednesday, December 13, 1995, at the Arkansas Medical Society

office in Little Rock and the following business was received and transacted:

1. The Executive Committee endorsed the Arkansas Museum of Science and History Health Hall. A letter of endorsement will be forwarded to Mr. Bill Bradshaw and this endorsement will be mentioned in the AMS Newsletter.
2. The Executive Committee reviewed a letter from Arkansas Blue Cross Blue Shield concerning its workers' compensation managed care program. The Executive Committee suggested this information be provided to the membership through the AMS Newsletter.
3. The Executive Committee endorsed the nomination of Dr. William N. Jones for a position on the AMA's Council on Scientific Affairs. A letter of endorsement will be forwarded to the AMA.
4. The Executive Committee approved a recommendation from the Arkansas Health Care Providers Coalition and endorsed the Arkansas Medical Society's involvement with the coalition. The Executive Committee requested the Budget Committee approve approximately \$6,000.00 in funding for this program. Funding will also be provided by other organizations in the coalition in proportion to their share of the Medicaid budget.
5. The Executive Committee approved a list of physicians requesting direct membership in the Arkansas Medical Society.
6. A certificate of appreciation to Mr. Leon Brown was signed by the members present. This certificate of appreciation is for helping Arkansas physicians during his years of service with Arkansas Blue Cross Blue Shield.
7. The Executive Committee requested a letter of support be written to the AMA on behalf of Dr. William Golden who is running for a position on the AMA's Board of Trustees.
8. The Executive Committee heard a report from Mr. Mike Mitchell concerning the lawsuit pertaining to the Patient Protection Act. The case is scheduled to be heard on May 20, 1996 in a court trial before Judge James M. Moody. Discovery is to be completed no later than March 25. Mr. Mitchell was encouraged that there were no immediate rulings from the bench.
9. A presentation was given by Dr. David Davis con-

cerning physicians in northwest Arkansas interested in organizing an insurance company. The Executive Committee did not make any decisions regarding this matter.

The Arkansas Medical Society Executive Committee met on Wednesday, January 24, 1996, at the Arkansas Medical Society office in Little Rock and the following business was received and transacted:

1. The Executive Committee received an update on the Patient Protection Act lawsuit. The attorneys have until March 25 to complete discovery. The trial date is set for May 20 in Judge Moody's court. Mike Mitchell expects a decision sometime in June.
2. The Executive Committee received an update from David Wroten on the Workers' Compensation Commission requirements for continuing medical education. He also discussed concerns by insurance companies regarding the mandatory managed care organization requirements. David reported that no where in the law does it mention this being mandatory.
3. The Executive Committee discussed the AMA Leadership Conference to be held in March. The Executive Committee gave its approval for three members and one staff person to attend the conference and for the Society to pay Dr. William Jones' registration fee with the remainder to come from his campaign funds.
4. The Executive Committee reviewed a request for membership in the Arkansas Tort Reform Association (ATRA). The Society paid \$5,000.00 last year to join ATRA when legislation on tort reform was expected to be introduced in the legislature. The Executive Committee asked Ken LaMastus to review this matter and consider a lower contribution.
5. The Executive Committee discussed endorsing Autoflex Leasing Company. This would be a five-year commitment and would be managed through AMS Benefits. The agreement includes advertising in the journal and membership directory, support at the annual convention, and \$100.00 per automobile leased or purchased by Arkansas physicians. The Texas, Oklahoma, and the Pennsylvania Medical Associations also endorse Autoflex Leasing. Currently some AMS members purchase their vehicles through Autoflex and are satisfied with their services. The AMS recently purchased a company automobile through Autoflex and the savings were approximately \$800.00 over other companies. The Executive Committee gave its

approval for endorsement of Autoflex Leasing Company.

6. The Executive Committee discussed preparing a legal guide containing all the medically related laws in Arkansas. Mr. Mitchell indicated he has a law clerk who could spend the summer working on this project instead of one of the law partners which would be a considerable savings for the Society. The Executive Committee recommended this be referred to the Council at its next meeting with estimates on the cost of preparing the guide and estimated sale price.
7. The Executive Committee reviewed information concerning leasing a portion of the AMS Management Company suite. This cost of preparing part of the suite to be leased could be as high as \$10,000 to \$11,000. There are potential tenants who have expressed interest in the space. The Executive Committee recommended that we proceed with leasing the unused portion of the AMS Management Company suite.
8. The Executive Committee approved a list of physicians requesting direct membership into the Arkansas Medical Society.
9. Dr. John Crenshaw recommended that we contact Dr. James Adamson at Arkansas Blue Cross Blue Shield and ask him to provide a list of MSRC and Medicare Advisory Committee members who have missed two consecutive meetings or one-half of the meetings per calendar year. This would help us and the specialty groups in appointing physicians to serve on these two committees.

Report of the Executive Vice President Ken LaMastus, CAE

By far the predominant health care issues in Arkansas during the past year have been those involving managed care. We have seen the growth and development of an alphabet soup of organizations such as IPA's, PHO's, PPO's, MSO's, and HMO's. We are hearing more about such terms as economic credentialing, closed panels, capitation, and withholds. We are seeing hospitals and physician groups being sold and alliances between hospitals and physician groups to the point where it is almost impossible to keep up with the various organizations. All of these changes are because of pressure for hospitals and physicians to contain cost while these providers are concerned about having an adequate number of patients to utilize their services. These changes are occurring across the nation. We are in a revolution in the way

health care is organized, delivered, and paid for. This revolution is occurring rapidly and has had an impact on all those involved in the delivery of health and medical care services.

There is a great deal of concern being expressed by both physicians and patients about the physician's ability to continue to be an advocate for their patients. Physicians in Arkansas are not accustomed to capitation systems that pay them for not seeing patients and reward them for how little they do for patients. There are concerns about the delivery of services by managed care organizations. This has been an issue on television programs and all major publications around the country. Concerns have been expressed in the media about managed care organizations giving salaries and benefits totaling as much as \$7 million a year to managers.

In discussions about managed care it is apparent that the physician has a legal and moral responsibility to be the advocate for the patient. This has been the traditional role of medicine and the ethical position that physicians should take. This will continue to have an impact on the physicians of Arkansas and the Arkansas Medical Society.

During the last legislative session the Arkansas Medical Society, through the efforts of Lynn Zeno, lead a coalition that was able to pass the Patient Protection Act. The Arkansas Medical Society, the Arkansas Attorney General's Office, and other groups are currently involved in a major lawsuit defending this law. There have been several federal district courts that have ruled various ways on this type of legislation. We are certain that one of these cases will end up before the U.S. Supreme Court. The Arkansas Medical Society has defended the idea that individuals should have the right to choose the professionals who provide their medical care services. This was strongly supported by the people of Arkansas and overwhelmingly passed by the legislature.

During the last few months the Society has been deeply involved with issues pertaining to the workers' compensation mandatory managed care organization plan. Even though legislation did not require it, the Arkansas Workers' Compensation Commission mandated that all employers, both self insured and insured, must be signed up with a managed care organization certified through the Workers' Compensation Commission. They also mandated that physicians must obtain a certain amount of continuing medical education to participate in the workers' compensation program. After intense pressure from the Arkansas Medical Society, the commission finally ruled that continuing medical education was not mandatory and because of public pressure they may not require employers to sign up with a managed care organization. This issue is still undecided. David Wroten has been

the lead staff person on this issue.

The Society along with the AMA is keeping a close watch on what will happen with the federal budget and what type of reductions will occur in Medicare and Medicaid. Most of the members of Congress are of the belief that some type of block grant program will be handed down to the states for the Medicaid program. This will leave the state of Arkansas in more control of the Medicaid program and free of some of the federal bureaucratic problems that have occurred in the past. This will also put tremendous pressure on the state to change parts of the Medicaid program. The Society along with other health care associations is watching at the federal and state levels to see what type of block grant legislation will be passed.

The Arkansas Medical Society is looking at various methods of obtaining a web site or address on the Internet. Other state medical associations are using the Internet as a means of communicating with their members through computer modems. The concern is to develop a system that physicians in Arkansas can link into at a reasonable cost. Such a system would allow for the posting information such as copies of legislative bills, key correspondence, and other items that might be desired by the membership.

Membership in the Arkansas Medical Society was at an all time high last year with a total membership of 3,851. This figure includes all classifications such as active members, residents, medical students, and retired physicians.

There is concern among the leadership as well as the staff about the impact of managed care on the membership and the role the Society should be providing to assist physicians. The principle role of the Arkansas Medical Society is, and will always be, to serve as an advocate for physicians in the same manner as the physician's role is to be an advocate for their patients.

On a personal level, I wish to thank all those who have taken part in the leadership of this association as well as those who have given their time working on issues important to medicine. Many times our knowledge about an issue comes from those who communicate with the leadership and staff. Also, my thanks to our staff for their efforts in your behalf.

Physicians' Health Committee

Joe Martindale, M.D., Chairman

The Physicians' Health Committee averaged seeing one new physician per month during the past year. We reviewed the credentials and recovery of twelve physicians coming to Arkansas from other states. Four physicians relapsed during 1995, they are all back in treatment. We have had approximately 200 physicians in the program. The Physicians' Health Committee has been very active in dealing with hospitals and

managed care companies since they have made us a part of their credentialing process. This was mostly a unilateral agreement from their standpoint but we went ahead and spent our time and money to do this since our physicians are involved.

Approximately 50% to 60% of the physicians we encounter are members of the Arkansas Medical Society. I am proposing an administrative fee of \$300.00 per year for members of the Arkansas Medical Society and \$600.00 per year for nonmembers. A \$20.00 increase in the medical licensure fees will provide most of the funds for the foundation. I feel that hospitals and managed care companies should contribute. This is beginning to occur in other programs across the country.

The Arkansas Medical Society is in the process of forming a foundation so contributions to our program will be tax deductible. As soon as the funds are available I plan to become the full-time director and hire a full-time secretary which will give me more time to give educational programs across the state and be in closer contact with our recovering doctors. We will be renting office space in a medical office building in Bryant.

I am excited about having a program that is on a par with other states. From all of us who have been involved with the Physicians' Health Committee, we say thank you to the Arkansas Medical Society for helping to make it all possible.

AMS Management Company Arkansas Managed Care Organization Janell L. Mason, COO

As we pass our second anniversary, we at AMSMC/AMCO celebrate the success we have experienced. With the 2nd largest statewide network of physicians

and hospitals, we strive to return the reigns of managed care to those most equipped to manage care - physicians.

AMCO is the only statewide physician-sponsored alternative to insurer-sponsored managed care. Our goal - to provide managed care which is competitive in pricing and superior in quality and access to care.

In 1995, much of our time was spent marketing our network to national payors, third party administrators and brokers. With an outstanding January 1996 enrollment, it is evident that AMCO has been well received in the market place.

The unique structure of AMCOs local community networks moves us in the right direction for the future - community-based integrated delivery systems with the ability to tie in to regional and statewide networks. We have been invited to present this concept to other physician groups, employers and carriers alike.

Some areas of the state have experienced an accelerated level of activity through their local AMCO. In surveying their particular situations, we find three common factors for success: a high level of physician participation, a low level of managed care penetration within the area, and most important, active involvement by local AMCO physician members.

In addition, AMSMC has continued to provide AMCO physician members with managed care contract summaries and we have also provided negotiating services for physicians who wish to access other managed care contracts.

In light of the ever-changing horizon of managed care, the structure of your organization has allowed us to address the needs of payors in a very unique manner. We look forward to taking the next step into managed care in 1996 and appreciate your continued support of AMCO.

Reports for Reference Committee #2

Ad hoc Committee on Managed Care Glen Baker, M.D., Chairman

The Ad hoc Committee on Managed Care has met on one occasion to discuss the needs of physicians considering the managed care environment. The two greatest needs that were pointed out by the committee were those of information and education.

The Committee discussed surveying physicians concerning managed care. However, there was a survey recently done by one of the Little Rock area newspapers pertaining to managed care. That information is widely known. Over 1,000 physicians were polled inside the Little Rock area and across the state. It was a rather extensive survey in terms of the number of physicians.

I have personally considered a focus group of

physicians representing various specialties in various areas of the state to determine the range of services the Society could provide to its members.

Medical Education Foundation for Arkansas Martin Eisele, M.D., President

The Medical Education Foundation for Arkansas was organized by the Arkansas Medical Society in 1959. It is governed by a board of directors appointed by the Council of the Arkansas Medical Society. I am privileged to serve as president. Other members of the board are Drs. Gerald Stolz, William Bishop, and James Kyser. Serving as ex-officio with voting power are the Arkansas Medical Society president, president-elect,

immediate past president, and the Dean of the University of Arkansas College of Medicine.

The Foundation receives funds contributed by the Arkansas Medical Society which amounts to \$5.00 for each full dues paying member per year. By conservative investment and expenditures, the Foundation has grown to a net worth in excess of \$400,000. The Foundation has an independent audit each year and a copy of the audit is provided to the Council. Funds are used each year to promote the art and science of medicine and the betterment of the health of the public by providing financial support to recognize schools or institutions who provide primary and advanced medical education. The board has established a policy of accumulating funds over a period of time so in the future the foundation will have adequate funds to undertake major projects.

Funds have been provided in the past to the University of Arkansas College of Medicine which uses funding to pay for speakers who would not otherwise have been available to lecture medical students and physicians in training. One example of this is Dr. James R. West, Professor and Chair of Anatomy, Texas A&M University College of Medicine, who spoke to the freshmen medical class. The purpose of this lecture was to introduce clinical concepts of fetal alcohol syndrome research.

The Arkansas Medical Society received a letter from Shirley Ann Gilmore, Ph.D., Chairman of the Department of Anatomy, and Patrick W. Tank, Ph.D., Course Director, Gross Anatomy, thanking the Society for providing support for such lectures. They stated, "activities such as this provide an important enrichment experience for medical students." The Foundation also provides occasional grants to other medical related programs.

Medical Services Review Committee

Joe Stallings, M.D., Chairman

The Medical Services Review Committee met on January 25, 1995, July 26, 1995, and October 25, 1995. The next meeting of the Medical Services Review Committee will be held on April 24, 1996. The Medicare's development of a clinical advisory committee has reduced the case load of the Medical Services Review Committee. The meetings have been less frequent, usually quarterly.

The efforts exerted by the members of the Medical Services Review Committee are appreciated by the Arkansas Medical Society Council and Arkansas Blue Cross Blue Shield.

AMS Medical Student Section

Brian Meyer, Immediate Past President

The Medical Student section had a busy and successful 1995. In addition to our local chapter activities,

members attended both the annual and interim AMA-MSS meetings in Chicago and Washington, D.C., as well as the annual AMS meeting in Hot Springs.

Increased membership communication was an important agenda item this year. We have started using E-mail for regular electronic newsletters. This has been well received and eliminates printing and mailing costs.

Several students began volunteering at the West Side Free Medical Clinic after Karen DiPippa spoke at our March and September meetings. First and second year students are given the opportunity to practice taking vital signs and basic histories while upper classmen have the opportunity for more independent work including detailed histories and physicals.

Last year was a big rebuilding year for membership. Our membership recruiter signed up just over one-half of the freshmen class in September and earned the section a \$1,300.00 recruiting bonus from the AMA. These funds will be used to support various chapter activities.

At our October meeting, students developed better business sense and money management during a question/answer panel sponsored by Boatmen's Bank. Students had the opportunity to talk to representatives from several departments about mortgages, student loans, credit, investments, and startup capital for a practice.

Several members recently attended the 1995 AMA-MSS interim meeting in Washington, D.C. A total of twenty items of business including eleven resolutions were considered. The major issue discussed at this meeting concerned fairness in the National Residency Matching Program (NRMP) and a resolution addressing bias in the match was transmitted immediately to the AMA House of Delegates.

Significant concerns were raised over the current realization that the NRMP operates according to a "hospital optimal" rather than a student optimal algorithm. The traditional explanation offered to students entering the match has not clearly represented the true nature of the match and has been misinterpreted by medical students and many in the medical community.

The MSS adopted a comprehensive policy asking the AMA to take immediate action to provide clear and correct information concerning the inherent bias in the hospital optimal algorithm used by the NRMP. Recognizing that the NRMP has hired an independent consultant to evaluate the situation the MSS asked the AMA to support this study and report back with an evaluation of the results. Finally, the policy states that the AMA should remain committed to ensuring a fair residency selection process that works to accommodate the students best interest.

Due to its extreme relevance to medical students,

this resolution was immediately forwarded to the AMA House of Delegates. Resolution #332, "Fairness in the National Residency Matching Program" was adopted by the AMA House of Delegates and amended by an additional resolve clause which further directed the AMA to include a clear description of the match algorithm and advisory to students in its Graduate Medical Education Directory.

In closing, I would like to extend a sincere thank you to Laura Harrison, the Arkansas Medical Society, and the members of the medical student section for your continued guidance and support of the AMS Medical Student Section.

Ouachita County Medical Society

Robert H. Nunnally, M.D., Secretary/Treasurer

The Ouachita County Medical Society blazed a new trail in 1995 by creating a mechanism to provide scholarships for health care students from Ouachita County. Two community clinics admit patients to the Ouachita County Medical Center. The physicians from these clinics do not manage inpatients because of the distance. In each instance the clinic provides a retainer fee for the physicians who take care of the clinic's inpatients. These physicians donate the proceeds of the retainer fees to the Ouachita County Medical Society to fund scholarships for students in the health sciences from this county. For 1996, three \$1,000.00 scholarships will be offered.

Drs. James Guthrie and Robert Nunnally retired from the Ouachita Valley Family Clinic in 1995.

Ouachita County Medical Society meetings were well attended in 1995. Members were very concerned about the rapid changing evolution in the medical care industry.

Pulaski County Medical Society (Eighth Council District)

Fred Reddoch, Executive Director

1995 was a good year for the Pulaski County Medical Society. Under the excellent leadership of President John L. Wilson, the Society engaged in a number of productive endeavors. Highlights of the year included the following:

1. presentation of a \$5,400 scholarship to a UAMS medical student.
2. administrative support of the Senior Physicians of Arkansas.
3. addition of 64 new members.
4. management of the Pulaski County Medical Exchange which handled over 500,000 calls for the Pulaski County Medical Society members and their patients.
5. meeting with Lt. Governor Mike Huckabee.
6. joint meeting with Pulaski County Bar Association

which drew over 220 persons.

The Society looks forward to another successful year with Dr. Bruce Schratz at the helm!

Arkansas Department of Health

Sandra B. Nichols, M.D., Director

It is my privilege to present to the Arkansas Medical Society a summary of the major accomplishments and activities of the Arkansas Department of Health in 1995. This has been an exciting year at the Department, but also one of anticipation. We have seen the mood of the country move increasingly toward goals of reducing both the cost of government and the cost of health care. We support these goals and are striving to accomplish them through the preventive and protective health services we offer. We have enjoyed a long history of a strong working relationship with the Arkansas Medical Society and its members and believe that this partnership is even more critical now to assure that the full range of appropriate health services is available to all our citizens.

Personal Health Services

- * Developed a simplified meal planning tool for pregnant women with gestational diabetes. The one page guide includes basic information on diabetic diet principles, the Food Guide Pyramid, and a sample day's menus.

- * Added single ingredient Ephedrine products to the list of controlled substances. All products containing Ephedra, Ephedrine, its salts, its optical isomers or salts of optical isomers as the sole active medicinal ingredient, or in combination with therapeutically insignificant quantities of another active, medicinal ingredient or ingredients, are now Schedule V Controlled Substances.

- * Implemented the Breast and Cervical Cancer Screening Program. Local health units, community health centers, and Area Health Education Centers began enrolling patients, targeting asymptomatic women who are over 50 years old with incomes below 200% of poverty.

- * Conducted special clinics and provided outbreak control measures in response to Hepatitis A. Like other states in the region, Arkansas has experienced a cyclic increase in Hepatitis A and set a new record in the number of cases. Six-hundred-thirty cases were identified in 1995, compared to 254 in 1994.

- * Developed rules and regulations adding testing for Galactosemia to the newborn genetic screening requirements in response to legislation passed in

the 1995 General Assembly.

- * Increased the percentage of two-year-old children age-appropriately immunized from 63% to 71%.

- * Provided HIV testing and counseling to over 76,000 patients, an increase of 11% over 1994 services.

Environmental Health Services

- * Developed a public education campaign for cryptosporidiosis. The educational effort targets immunosuppressed individuals for whom cryptosporidiosis can result in severe illness and possible death. Educational meetings and materials were provided to client advocacy groups and medical staff who work with at-risk groups. In addition, the program has aimed educational efforts at the water treatment plant operators and managers, and presentations have been made at local, state and national meetings.

- * Implemented the Mammography Quality Standards Act of 1995. The Act authorized the Department to be an FDA approved accreditation and certification body for medical facilities engaged in mammography. A health physicist has completed training and been certified as an inspector. There are currently 45 state accredited mammography facilities in the state.

- * Implemented a new fee schedule for radiation protection services, replacing the one implemented eight years ago. The additional revenues generated by the fee will provide resources to reduce licensing backlogs and delays and to provide additional services.

- * Conducted a medical needs assessment at the request of the Army and the Federal Emergency Management Agency to determine the hospital/medical emergency response capabilities in the counties subject to impact in the event of a chemical release. The Pine Bluff Arsenal stores 12% of the nation's stockpile of chemical munitions and plans to incinerate them in the next few years.

- * Approved the environmental remediation workplan for Naturally Occurring Radioactive Material (NORM) Contamination at the NPI site in Helena, Arkansas. NORM is a byproduct resulting from NPI's phosphate fertilizer production. NPI began a multi-million dollar clean-up operation in July 1995.

Technical and Support Services

- * Hosted an interactive satellite course, Epidemiol-

ogy and Prevention of Vaccine-Preventable Diseases, through the Centers for Disease Control and Prevention (CDC). Forty people from hospitals and community health centers across the state attended.

- * Served as host facility for the first White House Conference on AIDS through the Department's new satellite downlink equipment. Community leaders of AIDS prevention and treatment groups were thus able to participate in the nationwide event.

- * Entered into a cooperative agreement with the Agency for Toxic Substances and Disease Registry to work with local industries in El Dorado to provide education on environmental issues to physicians and other health professionals.

- * Produced a video on the "Use and Care of the Microscope" to be used to train staff in local health units who perform laboratory tests. The Centers for Disease Control's National Laboratory Training Network recommended that copies be made available nationwide.

- * Conducted a certified public swimming pool operator's course for Department sanitarians and pool operators.

- * Assisted businesses in providing educational and promotional materials to guide in the development of drug-free workplace programs through the "Drugs Don't Work" campaign.

- * Created, with the University of Arkansas at Pine Bluff, the Delta Assessment Center for Drug and Alcohol Prevention. The Center will provide technical assistance and program monitoring to community-based alcohol, tobacco and other drug prevention programs.

- * Coordinated the "Treatment Works!" campaign to promote alcohol and drug abuse treatment.

- * Created a statewide electronic bulletin board called "ADAP On-Line." This interactive communication system was accessed more than 21,000 times by over 800 users in its first year of operation. More than 2,000 files on a variety of health related issues related to alcohol, tobacco and other drugs are available free for users.

- * Received an award at the National Oral Health Conference for efforts to promote fluoridation of drinking water. Arkansas has the largest number of community public water systems which continu-

ously fluoridate at optimal levels. Since 1979 the Department has assisted 46 communities to fluoridate their water supplies.

- * Constructed a 20,000 square foot warehouse for Central Supply on the State Health Building grounds. The warehouse stocks all office and medical supplies used by the central offices and in over 100 local offices across the state. Replacing 6,000 square feet of space located in several different parts of the building, the new facility will allow improvements in inventorying, rotating stock, and packing and shipping.

- * Received three prestigious "Arkansas Quality Awards" in recognition of efforts to encourage continuous improvement in the workplace. Area VI received a Quality Interest Award; Area IX earned a Quality Commitment Award; and the Section of In-Home Services received the Quality Achievement Award, the highest honor presented.

Collaboration/Partnerships

- * Established a regulatory science internship program with the University of Arkansas at Pine Bluff. The purpose of the program is to enhance students' education through apprentice-type training in environmental health. Students will be exposed to the full range of environmental health protection services and clients who are affected by these services.

- * Worked with the Department of Human Services and Arkansas Children's Hospital to revise the Home Health list of medically necessary nutritional formulae covered by the Arkansas Medicaid Program. The effort deleted discontinued products, added new and cost-effective products, updated formulae product names for ease in filling doctors' prescriptions, and re-categorized formulae into their appropriate descriptive headings.

- * Placed a Certified Substance Abuse Counselor at the Pulaski County Probate Court. The counselor will assist in the placement of individuals who have committed a crime and been adjudicated insane and are being committed to the Arkansas State Hospital.

- * Entered into an agreement with the Department of Community Punishment (DCP) to provide alcohol and other drug abuse treatment services specifically for probationers and parolees.

- * Developed an agreement with the city of Little Rock for additional alcohol and drug treatment services for the adult residents of Little Rock.

- * Contracted with the Agency for Toxic Substances and Disease Registry to conduct focus groups in six locations in Southern Arkansas for the purpose of developing effective educational interventions addressing eating fish which contains mercury.

- * Lead in the formation of the Drew Central Violence Prevention Coalition to address violence and gang-related activities. The Coalition received an \$18,000 grant to train facilitators, provide parenting classes and materials, and furnish child care for program participants. The program is to include follow-up to encourage each participant to form a parent organization with the school and participating agencies when they return to their neighborhoods and communities.

- * Promoted 5-A-Day Week, a campaign to increase awareness of the need to eat five servings of fruits and vegetables each day for better health. Agencies participating in the activities included Baptist Hospital, AARP, Susan G. Komen Foundation, Department of Education, Healthworks of White County Memorial Hospital, and Eli Lilly Corporation.

- * Cooperated with the Department of Education's Comprehensive School Health Program in the development of a mini grant program focused on preventing the spread of HIV/AIDS among Arkansas adolescents. \$5,000 mini grants were awarded to four Arkansas communities.

- * Launched Operation KidCare, an outreach campaign designed to increase age appropriate immunization levels and promote well child checkups. Operation KidCare is a joint initiative of the Department of Health, Department of Human Services and Arkansas Children's Hospital.

- * Initiated the Common Ground Program for Arkansas Communities as passed in the 1995 Regular Session of the Arkansas General Assembly. The program is to "act as a bridge connecting and assisting government, communities and citizens to build a more responsive human, educational, and economic system where children and families can thrive."

- * Received, in conjunction with the Campaign for Healthier Babies, a \$48,000 grant from a private foundation in Northwest Arkansas to provide the Happy Birthday Baby Book, promotional and information literature, television and radio advertising and public health staff training in Spanish. Materials for Operation KidCare will also be trans-

lated into Spanish as part of the project.

- * Participated with more than 1,000 volunteers in providing services for the homeless and medically underserved in central Arkansas through Operation Care. Department staff provided immunizations to both children and adults, performed certifications for the WIC Program, provided nutritional counseling, and furnished HIV infection counseling and testing.

- * Assisted in launching the KICK (Keep Illegal Cigarettes from Kids) Campaign with the Tobacco-Free Coalition of Arkansas.

Grants and Funding

- * Approved a Local Health Unit Construction grant of \$600,000 from the Department's Health Building and Local Grant Trust Fund for Washington County.

- * Submitted requests through the Arkansas Economic Development Program of the Arkansas Industrial Development Commission's Community Assistance Division for construction of new local health units in Ashley County (Hamburg), Perry County, Poinsett County (Harrisburg), and Yell County (Danville).

- * Received \$150,000 from the U.S. Department of Health and Human Services' Healthy Schools, Healthy Communities initiative to enhance the ability of school staff in Arkansas to more effectively plan and provide services to children through the schools.

- * Received \$46,000 in supplemental funding from the Centers for Disease Control and Prevention to implement a sexually transmitted disease-caused infertility prevention pilot program. Selected counties provide chlamydia testing and treatment for women in STD and Family Planning clinics.

- * Received supplemental funding of \$12,000 as part of a new initiative that provides limited assistance to newly-diagnosed TB patients who must remain at home until they are non-infectious.

- * Received \$100,000 from CDC for the UAMS Arkansas Cancer Research Center Witness Project. The project is a culturally-sensitive, community-based breast and cervical cancer education program targeted to rural, underserved African American women.

- * Awarded Prevention Service Program grants to 33 community-based non-profit organizations to implement alcohol, tobacco and other drug abuse prevention activities that target high-risk youth. Twenty-two \$10,000 grants and eleven \$20,000 grants were funded.

- * Awarded 16 Community Coalition grants to local community groups for planning and implementing alcohol, tobacco, and other drug abuse programs.

- * Awarded funding to four local education agencies to provide classroom instruction by a uniformed law enforcement officer on alcohol, tobacco and other drug education.

- * Awarded funding to three local education agencies for the replication of successful drug-education programming to a new student population.

- * Awarded four youth conference grants to community-based non-profit organizations to host alcohol, drug and other drug education and prevention workshops targeting junior high and senior high school students.

- * Awarded a grant to UALR to develop and implement the Mid-South Center for Addictions Training Network. The Center will provide year-round training, including "distance learning," state-of-the-art technology, for beginning and advanced counseling, as well as a management track for administrators of treatment programs. This network will be marketed to other helping professions, e.g. social workers, medical professionals, etc., who have an interest in the field of substance abuse.

- * Awarded a grant to UALR to provide administrative services for the Arkansas Substance Abuse Certification Board. This grant provides for a full-time administrator to handle the daily operations of the board, including establishing a database of all current and potential certified counselors. This effort, along with the Mid-South Center for Addictions Training Network, is designed to alleviate the shortage of well-trained, certified substance abuse counselors.

- * Received a grant from the Environmental Protection Agency to conduct more intensive lead paint testing in homes where children have been found to have high blood lead levels. Homeowners are advised on proper abatement of the lead source.

* Received an Environmental Education Grant from the Environmental Protection Agency to train volunteers to conduct educational presentations . The volunteers will provide programs similar to those used by the "Water Wizard" to educate people, particularly children, on the principles in producing water safe for public consumption. The goal is to have at least one trained volunteer in each county.

* Received a \$1.4 million grant to provide breast and cervical cancer screenings for low income women over the age of 50. Services include Pap smears, mammograms, diagnostic services, and follow-up.

* Received \$75,000 through a contract with the University of Kentucky for outreach services to increase screening, treatment and follow-up of breast and cervical cancer in underserved women age 50 and older. This Breast and Cervical Cancer Outreach demonstration project is being piloted in several counties in Northwest Arkansas.

As we look forward to 1996, we expect the changes in the health care environment to continue. We recognize that our role in this new environment is evolving. As we develop our strategic plan to meet the public health needs of Arkansas, we look forward to working with you to protect and improve the health of the citizens of Arkansas.

Table 1 —
Personal Health Services - Selected Statistics

Services	FY95
Maternal and Child Health	
Child Health Patients	39,760
EPSDT Screenings	57,284
Family Planning Patients	72,040
Maternity Patients	16,926
WIC Clients Served	152,032
Communicable Disease Control	
AIDS Testing and Counseling	76,234
TB Skin Tests	78,707
Immunizations	
HIB	97,493
Polio	123,362
DPT	132,636
MMR	76,393
In Home Services	
Patient Admissions	22,294
Recovering Patient Visits	574,335

Chronic Patient Visits	62,224
Frail Patient Visits	961,757
Hospice Patient Days	35,399

Substance Abuse Treatment	
Adults Served	12,639
Adolescents Served	1,069

Table 2 —
Services to Protect the Environment and Health of the General Public - Selected Statistics

Services	FY95
Food Service Establishment Inspections	19,720
Septic Tank Permits	9,063
Radiological Equipment Inspections	275
Laboratory Samples Analyses	505,423
Environmental Complaints Investigations	7,350
Water and Wastewater Plans Reviews	3,447

Arkansas Health Care Access Foundation, Inc. **Joe Colclasure, M.D., President**

When the Arkansas Health Care Access Foundation, Inc. (AHCAF) was started in 1989, few expected it to grow and prosper as it has. Originally designed to provide low income medically uninsured Arkansans with access to physician office visits, it has expanded to provide services through additional medical professionals and programs. For the past seven years, AHCAF has been dedicated to helping medically indigent Arkansans improve their quality of life through more accessible health care. You and your colleagues have played an integral role in our pursuit of this goal.

This past year brought several interesting changes within the program. The Foundation has been working with the Arkansas Department of Health's Breast and Cervical Cancer Control Program (BCCCP) by assisting poor, uninsured Arkansas women in obtaining further diagnosis and treatment as needed. Since November, more than 60 women who were screened through the BCCCP program have received donated office visits, evaluation, radiology, pathology, anes-

thesciology, oncology, surgery and hospitalization from AHCAF volunteer professionals. We are thankful for you and your caring staff who have allowed these women access to lifesaving care that they otherwise might not have received.

The Community Health Centers of Arkansas, which serve the general population in eastern and southern areas of our state, have recently joined the Foundation to provide primary care to our needy clients. The Foundation is also exploring the possibility of assisting a national dental referral program in establishing a comprehensive dental care program for needy, low-income Arkansans. Recently, Arkansas Podiatrists have agreed to join our other medical volunteers in donating their services. We anticipate these professionals will help provide foot care to the 6% of our clients who are diabetic.

This month, we are most pleased to announce that Eli Lilly and Company has agreed to provide insulin through their "Lilly Cares" voucher program. Plans are to make the insulin readily available for qualified AHCAF applicants by administering the voucher referrals from the AHCAF office.

Arkansas hospitals have been most supportive and cooperative as they have been called upon more frequently by the Foundation to provide a wide variety of in-patient and out-patient services. Their willingness to work with AHCAF lends great support to the physicians treating our referred patients.

In a continuing effort to expand the types of services to the medically indigent in Arkansas, the Foundation is reaching across health care boundaries by working in a cooperative effort with other health organizations in the state. Since last February, we have made over 450 other referrals for services outside our program. The Arkansas Health Care Access Foundation boasts over 1,000 physician volunteers, which is up from 860 in 1989. This entire AHCAF network of over 1,700 health professionals, consisting of physicians, dentists, pharmacists, hospitals, home health agencies, the Arkansas Department of Health and the Arkansas Department of Human Services, has "insured" over 40,000 needy Arkansans at an annual cost of approximately \$15.00 per year, per patient.

Special acknowledgment is owed to Pfizer, Johnson & Johnson and SmithKline Beecham pharmaceutical manufacturers for their continued support of our program. By making their full line of products available at no charge to the patient, they have helped ensure continuity of care. Rarely, have so many different types of health care professionals been united in this type of statewide endeavor!

Arkansas Health Care Access Foundation, Inc. continues in its aim to provide health care to the state's medically indigent by looking at additional ways of helping them to access medical care. Improvement has

been made in the application process by allowing the county health units of the Arkansas Department of Health to act as added points of entry into the referral system. Now, needy Arkansans may access the program from anywhere in the state, through the local Department of Human Services office or local Public Health unit.

KATV-Channel 7 continues a long range commitment with AHCAF and has produced three Public Service Announcements over the past two years. Narrated by news anchor, Karen Fuller, the PSA's generate record numbers of inquiries when aired. The donated air time is currently in excess of \$75,000.00! The Foundation has processed over 11,000 telephone calls since February 1995!

Recruitment of volunteers remains a high priority for the Foundation and this past year we have successfully recruited volunteers from the private sector as well as all AHEC clinics and the Community Health Centers of Arkansas. Volunteer professionals such as dentists and pharmacists are recruited on a regular basis and continue to generously and compassionately provide much needed care. Our staff remains active in participating in workshops, inservices and talk shows to help promote the Foundation's work. Staff and board members are always available for inservice to county medical society meetings and local club meetings and would welcome the opportunity to share information about this remarkable program.

Support from all sectors of the health care community is one of the keys to maintaining a successful program. Our family of health care professionals continues its commitment to serve those Arkansans who are poor and medically uninsured. Thank you for making AHCAF the type of program that has made a difference in many lives.

If you are interested in knowing more about this method of providing care to Arkansas' indigent, please contact one of the physician board members listed below or call 1-800-950-8233.

Harold Hedges, M.D.	Little Rock	664-4810
John Burge, M.D.	Lake Village	265-5343
Simmie Armstrong, M.D.	Pine Bluff	535-6461
Gilbert Buchanan, M.D.	Little Rock	664-4117
John Hestir, M.D.	DeWitt	946-3637
Joe Colclasure, M.D.	Little Rock	227-5050
Charles Chalfant, M.D.	Fort Smith	484-7100
Joe Stallings, M.D.	Jonesboro	933-9245

Arkansas State Medical Board Peggy Pryor Cryer, Executive Secretary

The members and officers of the Arkansas State Medical Board during 1995 were W. Ray Jouett, M.D., Chairman; Warren M. Douglas, M.D., Vice Chairman;

Alonzo D. Williams, M.D., Secretary; Mr. John Currie, Sr., Treasurer; John E. Bell, M.D., Owen H. Clopton, M.D., Steven F. Collier, M.D., Mr. Ted J. Feimster, David C. Jacks, M.D., Linda A. McGhee, M.D., C. E. Tommey, M.D., Rhys A. Williams, M.D., and James Zini, D.O.

The Board met quarterly and addressed complaints, hearings, and other pertinent business affecting health care in the state of Arkansas. Issues addressed by the board were centralized credentials verification services, committee report on treatment of benign pain, change of license renewal dates (implementation in 1997), and proposed implementation of continuing medical education licensure requirements.

Licensing statistics: medical doctors and doctors of osteopathy - 7,514; medical doctors and doctors of osteopathy who practice in the state - 4,541; total medical doctors and doctors of osteopathy licensed in 1995 - 413; occupational therapists licensed in 1995 - 119; total number of occupational therapists licensed - 541; occupational therapist assistants licensed in 1995 - 32; total occupational therapists licensed - 85; total number of physician trained assistants licensed - 33; respiratory care therapists licensed in 1995 - 575; total number of respiratory care therapists licensed - 945.

Summary of the Board's proceedings for 1995: individual complaints and discussions - 167; show cause orders issued - 21; suspended license - 9; license placed on probation - 11; monetary fined - 5; physicians requested to appear for further discussion - 14; physicians required to notify board before practicing in the state - 6.

Nature of the complaints: quality of care issues - 52; communication or doctor/patient conflicts - 42; emergency room treatment - 7; alcohol/drugs - 12; billing discrepancies - 10; lack of physician response to

patient - 7; failure to release medical records - 6; overcharging - 6; sexual harassment - 9; front office personnel - 1; advertising - 2; actions taken by other state boards - 5; adverse actions taken by other institutions - 1; overtesting - 2; record keeping - 1; over prescribing - 3.

Public hearings were held on Regulations #8 and #10. Regulation #8 was repealed. Regulation #10 changes the fee and licensing requirements for Respiratory Care Therapists.

Financial Report - June 30, 1995

Current assets

Cash	\$530,902
Certificates of deposit	1,213,788
Accrued interest receivable	15,071
Prepared Physicians' Health Committee Education	10,000
Total current assets	\$1,769,761

Fixed assets - at cost

Furniture, fixtures, and equipment	\$81,886
Less accumulated depreciation	(53,720)
Net fixed assets	\$28,166
Total assets	\$1,797,927

Liabilities and Net Assets

Current liabilities

Accounts payable	—
Deferred income	\$61,485
Accrued payroll taxes	—
Accrued wages	—
Accrued unused vacation pay	7,866
Total current liabilities	\$69,351
Net assets unrestricted	\$1,728,576
Total liabilities and net assets	\$1,797,927

Other than this...



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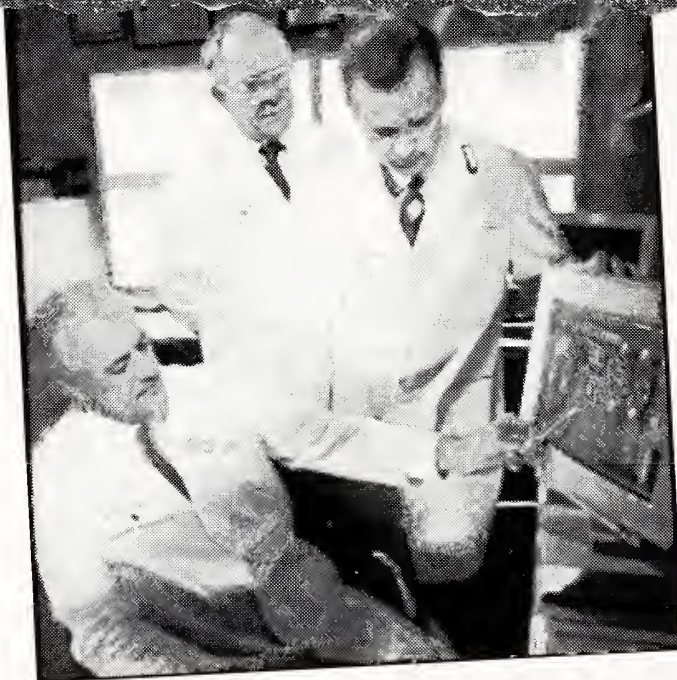
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St. Vincent is proud to provide Arkansas' first and only Positron Emission Tomography (PET) scanner to benefit you and your patients. As you know, PET scanning is not an anatomic imaging technique such as MRI and CT, but utilizes 18F fluorodeoxyglucose (FDG) to evaluate cellular metabolic activity. This state-of-

the-art technology evaluates the biochemical activity of various body organ systems allowing for earlier detection of even the smallest tumors and evaluation of neurological disorders and myocardial viability.

Utilization of 18F FDG and PET not only helps detect malignancies, blockages and other signs of

disease, it provides a valuable and effective tool for diagnosis and for evaluation of the effectiveness and efficacy of particular treatments. PET scanning has been shown to be an excellent method for the evaluation of cerebral vascular disease and various types of dementia (such as Alzheimer's disease) and for differentiation between recurrent brain tumor and necrosis.

For further information concerning PET scanning, please contact Dr. Jerry L. Prather, Dr. Turner Harris, Dr. David Weiss or Rick Bearden, CNMT, in the Nuclear Medicine Department at St. Vincent Infirmary Medical Center at 501-660-2190.



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(As of February 29, 1996)

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Paul Neis
David Sward

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Ralph Ritz
Richard Rodkin

Boone County

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Carlton Chambers
Sue Chambers
James Crider
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Oliver Wallace

Cleburne County

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Craighead/Poinsett Counties

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Marolyn Speer
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a ways to go to be 100%, but I can
breathe and walk across the room
now. I had given up hope almost,
and I remembered Arkansas Health
Care. The doctor gave me two of
the medicines I needed and the
pharmacy you sent me to filled the
antibiotics. Your doctor even
"chewed" me out for not coming in
two weeks previously. I'm starting
to feel good again. God bless you.

Western Wildlife

As Easterners moved West, pioneers
found animals as exotic as the landscape...
buffalo, prairie dogs, bears, beaver, bighorn
sheep, cougars, wolves and rattlesnakes.

The eagle became a national symbol.

I wanted to thank everyone
involved with this
program. We had no
one else to turn to
and we were in desperate
need of doctors and
medications.
Your program has
helped us through a very
difficult time.



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Little Rock, AR

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I would like to say thank you first
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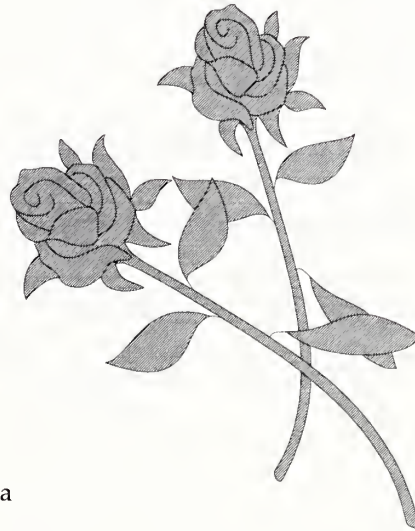
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Memorials

Members of the Arkansas Medical Society and Alliance who have died this past year will be remembered during the opening House of Delegates beginning at 5:00 p.m., Thursday, May 2, 1996, at the Excelsior Hotel in Little Rock. Members to be honored are:

Society Members:

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THIRD GENERATION PLASMINOGEN ACTIVATORS IN THE TREATMENT OF ACUTE MYOCARDIAL INFARCTION

Streptokinase, urokinase, and APSAC non-selectively bind fibrin and induce a systemic fibrinolytic state. rt-PA (alteplase) is manufactured by recombinant technology and semi-selectively binds fibrin; however, the short half-life requires continuous intravenous administration. Two third generation plasminogen activators are currently undergoing clinical study in patients with acute myocardial infarction (MI). These new drugs have increased fibrin specificity, induce less systemic fibrinolysis, and have a longer half-life that allows bolus dosing.

TNK-tpa

TNK-tpa (Genentech, South San Francisco, CA, USA and Boehringer Ingelheim, Ingelheim/Rhein, Germany) is a recombinant molecule in which a carbohydrate side chain and four amino acids have been removed from the parent rt-PA compound. This molecular modification provides decreased renal clearance and increased fibrin specificity that allows for intravenous bolus dosing (given over 5 to 10 seconds).¹

This molecule was evaluated in the Thrombolysis and Thrombin Inhibition in Myocardial Infarction (TIMI)-10A phase I clinical study as treatment of acute MI. In this dose escalating trial (5 -> 50 mg.), all 113 patients received aspirin and intravenous heparin and underwent a cardiac catheterization to determine the patency of the infarct related artery at 90 minutes after the patient was administered the study drug. In this study the following characteristics were noted: mean age 54±10 years; 84% were male; 36% had anterior MI, and the mean time to treatment was three hours.

The primary endpoint of TIMI-10A was the pharmacokinetic action of TNK-tpa molecule. Secondary

endpoints included coagulation parameters, Thrombolysis in Myocardial Infarction (TIMI)-3 flow at 90 minutes after giving the bolus infusion, TIMI frame count², major hemorrhagic events, and allergic events. With the 30 and 50 mg dose of TNK-tpa, the pharmacokinetics curve dose was similar to 100-mg of rt-PA given over 90 minutes. TNK-tpa did not decrease the levels of plasminogen and fibrinogen thus showing that the drug did not induce a generalized fibrinolytic state. In this small study, death occurred in 4 patients (3.5%) and recurrent MI in 4 (5.7%). There were no strokes and serious bleeding was noted in 6 (5.3%). There were no anaphylactic reactions and antibodies to the TNK-tpa molecule were not detected. There was 65% TIMI-3 flow and 86% TIMI-2+3 flow with the 50-mg dose.

Two phase II trials are in progress to further evaluate the efficacy of TNK-tpa. TIMI-10B is an angiographic patency trial in which 450 patients will be enrolled using the two "best" doses of TNK-tpa (30 and 50 mg.) compared to front-loaded, weight-adjusted rt-PA (100-mg./90 minutes). The primary endpoint of this trial is TIMI-3 flow at 90 minutes. Secondary endpoints include: TIMI frame count, safety, and clinical events during the index hospitalization. A second phase II trial (ASSENT I) is a safety trial of the 30 and 50-mg doses and will enroll 3000 patients.

Reteplase

Reteplase (r-PA, Boehringer Mannheim Pharmaceuticals, Gaithersburg, MD, USA) also resembles rt-PA. It is produced in *Escherichia coli* cells and lacks three domains and the carbohydrate side chain. r-PA is cleared by the liver and kidney and antibodies specific to the molecule have been detected. The long

* Dr. Talley is Professor of Internal Medicine & Associate Director, Division of Cardiology, UAMS.

TIMI-2+3 Patency Rates in RAPID-2

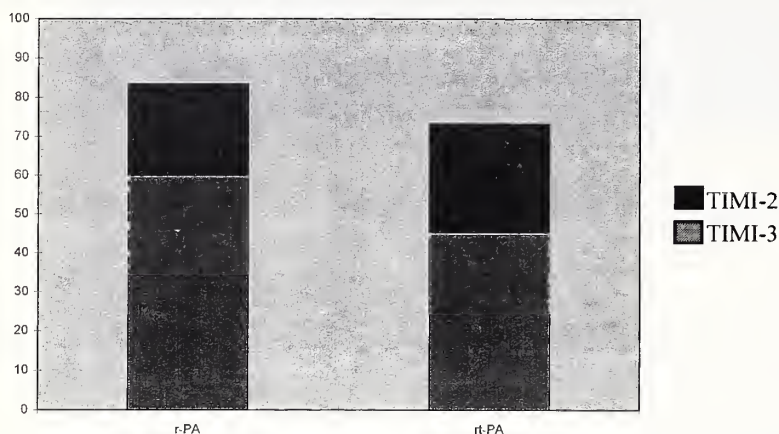


Figure 1: Thrombolysis in Myocardial Infarction (TIMI) 2 + 3 angiographic patency rates in The Reteplase vs. Alteplase Patency Investigation During myocardial infarction (RAPID)-2 trial. This study compared r-PA (10 + 10 MU given 30 minutes apart) to rt-PA (100 mg, given over 90 minutes). The patency rates r-PA = 83.4%, rt-PA = 73.3% were statistically different, $p < 0.05$.

Abbreviations: RAPID = Reteplase vs. Alteplase Patency Investigation During myocardial infarction, r-PA = Reteplase, rt-PA = Alteplase, TIMI = Thrombolysis in Myocardial Infarction.

half life of r-PA allows for administration with two bolus doses, given 30 minutes apart. Each bolus is given in less than two minutes.³

There have been three well-controlled clinical trials of r-PA in patients with acute MI. The Reteplase vs. Alteplase Patency Investigation During myocardial infarction (RAPID)-1 trial showed that two 10 MU boluses separated by 30 minutes achieved a TIMI 2+3 patency rate of 85% at 90 minutes.⁴

r-PA (10 + 10 MU given 30 minutes apart) bolus was compared to rt-PA (100 mg. of rt-PA given over 90 minutes) in RAPID-2. The primary endpoint was angiographic patency of the infarct related artery determined at 90 minutes after drug infusion. This trial showed that r-PA had a greater patency rate than rt-PA given in an accelerated dosing format (Figure 1).⁵

r-PA was compared to streptokinase in the International Joint Efficacy Comparison of Thrombolytics (INJECT) trial.⁶ This trial evaluated the efficacy and safety of r-PA (10 + 10 MU r-PA separated by 30 min) compared to that of streptokinase (1.5 MU over 30 minutes) in patients presenting with ST segment elevation acute MI within 12 hours after the onset of chest discomfort. The trial was conducted in 6,000 patients treated in 208 coronary care units in nine European countries. At 35 days, there was a 9% mortality rate (the primary endpoint) in patients who received r-PA, compared to 9.5% in those patients who

received streptokinase, a difference of 0.51% (90% confidence interval -1.74-0.73). The in hospital stroke rate was 0.13% in the r-PA group and 0.2% in the streptokinase patients. This trial indicates that r-PA is a convenient, effective, and a safe thrombolytic agent compared to streptokinase.

A phase III, 30-day mortality trial, comparing r-PA and accelerated, weight adjusted rt-PA, Global Use of Strategies To Open occluded coronary arteries (GUSTO)-III, will begin this summer. GUSTO-III will be conducted in approximately 500 centers in the United States and Europe in 15,000 patients experiencing acute MI with ST segment elevation, who present within six hours from the onset on chest discomfort.

Conclusion

Third generation plasminogen activators used in the treatment of acute MI offer the promise of improved ease of use, faster time to treatment, and superior angiographic patency rates. The safety profile and potential for survival benefit remain to be determined.

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State Health Watch

Information provided by the Arkansas Department of Health

Legionellosis and Serological Interpretations

Legionella bacteria are widespread in environmental, industrial and domestic water sources. Infection is acquired through inhalation of aerosolized water contaminated with *Legionella*; there is no evidence of person-to-person transmission. Cultures of water sources may be positive, but are rarely linked to human disease. Therefore, environmental cultures are not recommended unless an isolate from a human case can be compared, by typing, to an environmental isolate.

Reported cases in the U.S. have increased gradually from the first recognized outbreaks. From 1985-1994, the U.S. rate has been approximately 5 cases per million persons, ranging from 830 to 1,615 cases per year. The increase probably reflects the development and use of improved diagnostic procedures. For the same period, 79 cases were reported in Arkansas, ranging from one (1) in 1992 to 16 in 1994, for an average rate of 3.4 per million.

At least 18 species of *Legionella* cause human disease, but *Legionella pneumophila* is responsible for the majority of cases. *Legionella* causes a spectrum of illness from asymptomatic infection to the most severe form, Legionnaires' disease, a potentially fatal pneumonia. A self-limited flu-like illness (Pontiac fever) may occur, which is probably a response to inhaled antigen, rather than bacterial invasion. The majority of cases are sporadic but epidemics and nosocomial infections are well described. Outbreaks have been attributed to air-conditioning systems, cooling towers, shower heads, hot tubs and grocery store mist systems. Sporadic cases may be of public health importance, as they may represent unrecognized clusters. Reports of more than one case from the same geographic area in the same time period warrant a preliminary investigation to rule out a common source of infection.¹

There is often confusion regarding the interpretations of the results of serological tests for *Legionella* antibodies, especially when only a single serum specimen is tested. Correct interpretation of single serum testing can be done only within the context of the patient's clinical presentation. The serological test furnishes data retrospectively, weeks past the acute stage of illness. It detects and measures the antibody response by the body's immune system to the bacterium that causes Legionnaires' disease. It does not determine

the current presence or absence of the bacterium in the body. Serological test results indicating a high titer may indicate a continued immune response from an exposure or infection which occurred months or years in the past.

The following information may be helpful in interpreting serological test results:

*Sera not reacting at $<1:64$ are considered negative.

*A test result of $\geq 1:64$ on a single serum, in the absence of clinical illness, generally indicates that the person had exposure to *Legionella pneumophila* sometime in the past. It does not mean that the person is a carrier of Legionnaires' disease. In fact, the person with a test result of $\geq 1:64$ may have some level of immunity to the disease. A single serum specimen drawn and tested during the acute phase of the illness is not a reliable diagnostic measure.

*A single test obtained during a person's illness must be carefully interpreted as to whether it represents the beginning (acute) low level of antibody or ending (convalescent) high level.

*From the date of disease onset, it generally takes three to six weeks for antibody levels to peak. During that time, antibody levels will normally change from negative (no antibody detected) to positive with high titers of antibody to *Legionella pneumophila*.

In a large study of healthy volunteers in Dubuque, IA, nine (9) percent of the people had a single titer of 1:128, four (4) percent had a single titer of 1:256 and one-half (0.5) percent had a single titer of $>1:512$.² Therefore, a single high titer is not an uncommon finding, even in healthy persons with no known exposure to *Legionella*. Additionally, as with all serological tests, false positive results may occur.

*Ideally, paired specimens should be submitted for testing at the same time. One (acute) should be drawn within one week of the date of disease onset and a second (convalescent) specimen drawn three to six weeks after disease onset. The first specimen should be stored frozen until the second specimen is drawn. In order to ensure an accurate comparison of titers between the acute and convalescent specimens, the laboratory should test both specimens in the same test run. Demonstration of a fourfold or greater rise in the immunofluorescent antibody (IFA) level to $\geq 1:128$ against *Legionella pneumophila* serogroup 1 is presumptive

tive evidence of acute infection. It should be noted that the sensitivity of serological diagnosis is approximately 80 percent, due to false negative tests results. Seroconversion occurs in most patients within three weeks after disease onset, but it may take as long as six weeks and some patients with this disease never seroconvert.

*A positive *Legionella* antibody test result $\geq 1:256$ from a single convalescent serum specimen supports the diagnosis in a patient with a compatible history of illness.

Other accepted diagnostic measures include:

*Demonstration of *L. pneumophila* serogroup 1 antigen in urine by radioimmunoassay. This is the test of choice for a diagnosis early in the patient's illness. There is a short turnaround time for test results and the test is very specific and sensitive for serogroup 1. However, this test may remain positive months after the infection is over.

Influenza Update

Arkansas - As of early March, influenza activity has greatly decreased in Arkansas. For the 1995-96 influenza season, the Arkansas Department of Health has obtained twenty-six positive influenza cultures. Twenty-five are type A (subtype unknown) and one is type B.

United States - Influenza activity has continued

*Isolation of *Legionella* from lung tissue, respiratory secretions, pleural fluid, blood or other normally sterile sites (results on cultures usually take three to six days), but few clinical laboratories isolate *Legionella*.

*Demonstration of *L. pneumophila* serogroup 1 in lung tissue, respiratory secretions or pleural fluid by direct fluorescence antibody testing. However, the sensitivity of the DFA stain is low (30 to 50 percent), as are DNA probes.

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to decline since the peak activity period of mid-December to early January 1996. For the week ending February 24, 1996, influenza activity has been reported as "widespread" in two states (Nevada and North Carolina) and "regional" in six states. Thirty-four states have reported "sporadic activity." Seven states (including Arkansas) reported no activity.

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Reported Cases of Selected Reportable Diseases in Arkansas

Profile for January 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Jan. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	12	12	9	6	152	187
Giardiasis	10	10	13	13	131	126
Shigellosis	7	7	9	22	175	193
Salmonellosis	18	18	13	20	332	534
Hepatitis A	60	60	18	12	663	253
Hepatitis B	5	5	7	6	92	60
HIB	0	0	2	1	6	5
Meningococcal Infections	6	6	5	9	39	55
Viral Meningitis	3	3	0	4	31	62
Lyme Disease	0	0	2	2	9	15
Rocky Mountain Spotted Fever	0	0	0	0	30	18
Tularemia	0	0	0	1	22	23
Measles	0	0	2	0	2	5
Mumps	0	0	1	1	5	7
Rubella	0	0	0	0	0	0
Gonorrhea	446	446	222	589	5437	7078
Syphilis	65	65	91	91	1017	1096
Legionellosis	0	0	1	4	5	16
Pertussis	1	1	4	5	60	33
Tuberculosis	3	3	0	0	271	264

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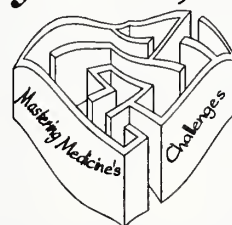
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Arkansas HIV/AIDS Report

1983-1996

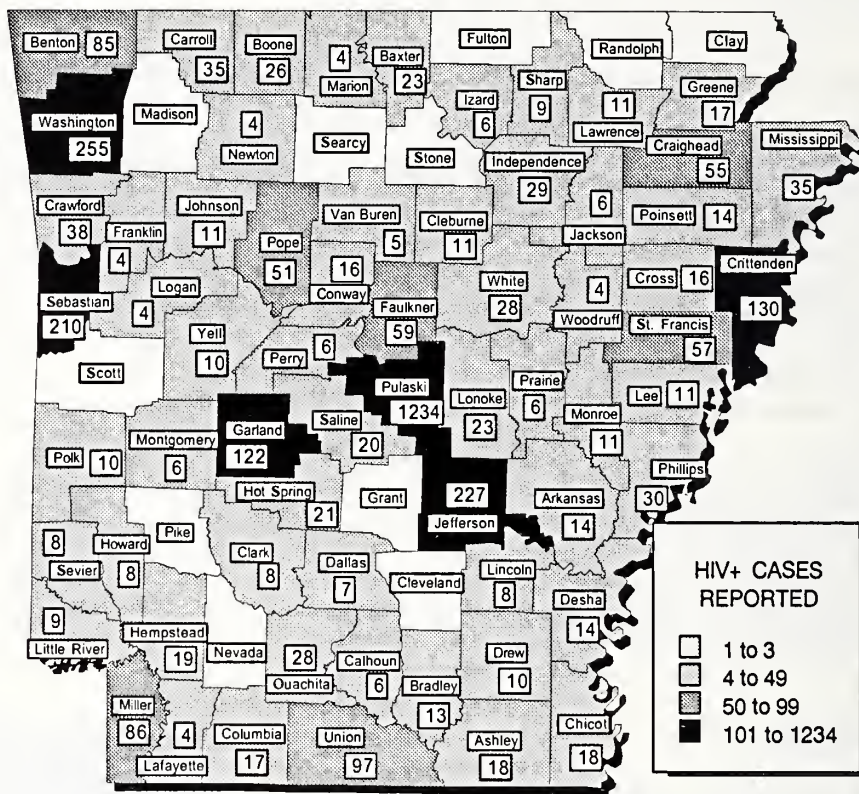
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



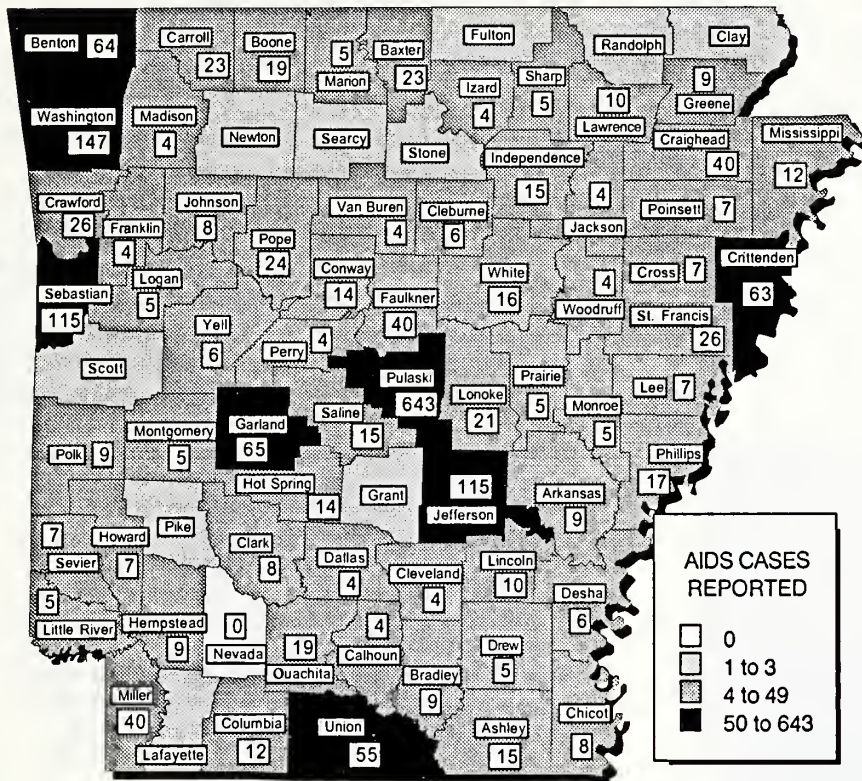
County of residence at the time of test for the 3,460 Arkansans reported to be HIV+. (2/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	100	215	248	413	400	392	352	367	338	40	2,865	83
	Female	8	26	37	68	85	81	94	90	92	13	594	17
AGE	<5	1	1	2	8	13	6	3	7	2	0	43	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	3	121	4
	20-29	33	110	123	183	149	156	175	145	126	17	1,217	35
	30-39	44	86	104	196	208	179	168	171	182	21	1,359	39
	40-49	22	25	35	56	70	67	65	77	70	7	494	14
	>49	8	6	11	17	22	38	23	35	37	6	203	6
RACE	White	87	170	174	328	298	293	278	259	261	31	2,179	63
	Black	21	69	108	151	184	173	163	184	159	19	1,231	36
	Hispanic	0	1	2	1	3	4	1	7	3	2	24	1
	Other/Unknown	0	1	1	1	0	3	4	7	7	2	26	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	149	14	1,723	50
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	48	2	522	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	24	2	237	7
	Hetero. (Known Risk)	5	25	26	59	64	68	100	89	48	1	485	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	35	41	23	12	8	33	154	35	362	10
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	430	54	3,460	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,460 Arkansans reported to be HIV+, 1,941 have been diagnosed with AIDS. (2/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	85	77	70	170	176	250	336	253	238	32	1,687	87
	Female	5	6	10	20	25	35	64	42	36	11	254	13
AGE	<5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	0	17	1
	20-29	31	27	24	55	57	81	110	67	58	6	516	27
	30-39	39	36	41	78	80	128	178	133	124	23	860	44
	40-49	15	10	7	35	41	52	78	61	52	9	360	19
	>49	5	8	7	11	13	19	27	30	35	5	160	8
RACE	White	74	61	58	141	134	206	275	190	174	27	1,340	69
	Black	16	20	21	47	66	75	121	102	97	14	579	30
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
RISK	Male/Male Sex	55	59	50	122	120	183	239	165	134	16	1,143	59
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	44	1	280	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	21	1	156	8
	Hetero. (Known Risk)	5	3	7	11	12	24	52	41	28	2	185	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	0	34	2
	Undetermined	0	2	1	3	1	2	2	9	34	22	76	4
AIDS CASES BY YEAR		90	83	80	190	201	285	400	295	274	43	1,941	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

HARRISON

Baumwell, Sterling Howard, Obstetrics and Gynecology. Medical Education, Washington University Medical School, St. Louis, MO, 1976. Residency, State University of New York, Buffalo, NY, 1980. Board certified.

JONESBORO

Garner, Barry Matthew, Gastroenterology. Medical Education, UAMS, 1989. Internship/Residency, University of Tennessee, 1990/1992. Board certified.

LITTLE ROCK

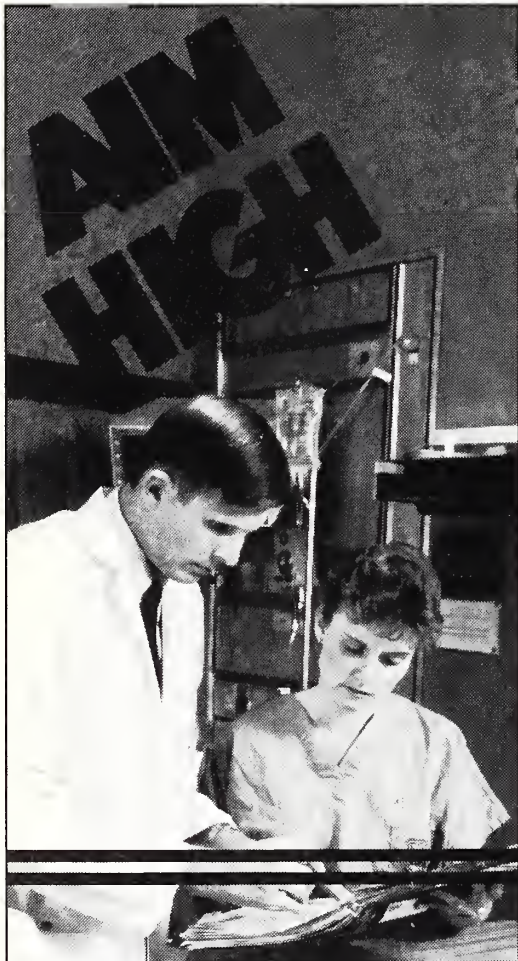
Mawulawde, Kwabena, Cardiothoracic Surgery. Medical Education, State University of New York, Buffalo, NY, 1985. Internship, SUNY, Stony Brook, NY, 1986. Residency, SUNY, Stony Brook, NY, 1991,

and Case Western Reserve University, Cleveland, Ohio, 1993. Fellowship, Loyola University Medical Center, Maywood, IL, 1994. Board certified.

Nance, Melvin E., Family Practice. Medical Education, UAMS, 1991. Internship, University of Oklahoma, 1992. Residency, University of South Alabama, 1995. Board eligible.

Snow, Sandra L., Pediatrics. Medical Education, University of Tennessee, Memphis, TN, 1971. Internship, University of South Alabama, Mobile, AL, 1972. Residency, Baylor College of Medicine and UAMS, 1975. Board certified.

West, Joseph Robert, Pediatrics. Medical Education, University of South Alabama College of Medicine, Mobile, AL, 1983. Internship and Residency, UAMS/Arkansas Children's Hospital, 1984, 1986. Board certified.



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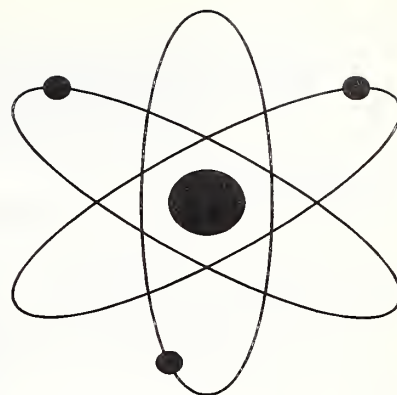
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Radiological Case of the Month

Steven R. Nokes, M.D.
Robert D. Dickins, M.D.
W. Bradley Pierce, M.D.



History:

A 30-year-old female presented with new onset postural headaches. She was afebrile. A CT scan revealed no evidence of subarachnoid hemorrhage. A lumbar puncture was performed with an opening pressure of 50 mm H₂O. The CSF was clear, with five lymphocytes and five RBCs/cc. Protein was 78 mg/dl. An MR scan of the brain was performed.

Figure A

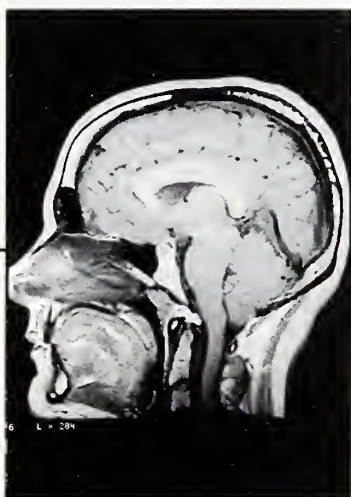


Figure B



Figure C

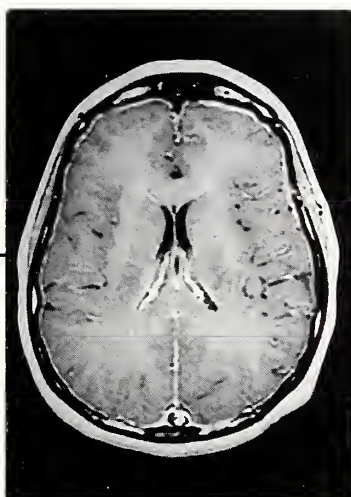
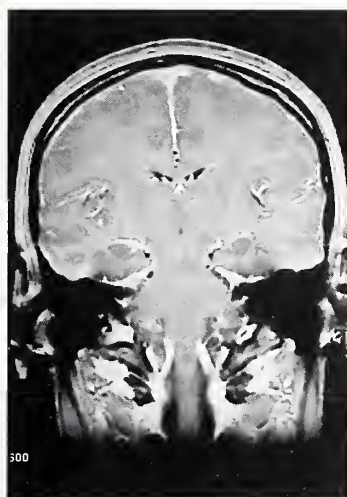


Figure D



Figures:

Sagittal T₁ (a), axial T₂ (b), axial T₁ post-contrast (c), and coronal T₁ post contrast (d) MR images of the brain.

Spontaneous Intracranial Hypotension

Diagnosis:

Spontaneous Intracranial Hypotension.

Radiographic Findings:

The sagittal image reveals mild cerebellar tonsillar herniation and depression of the optic chiasm and pons. The T₂-weighted image is normal. The post-contrast images demonstrate diffuse abnormal meningeal enhancement.

Discussion:

Spontaneous intracranial hypotension (SIH) was first described in 1938 by Schaltenbraud. SIH results from decreased CSF pressure which fails to support the brain and probably occurs from coughing or occult trauma that produces an occult CSF leak. A secondary form is more common and is seen following trauma or lumbar puncture and in dehydration.

The clinical hallmark is a striking orthostatic headache that subsides when the patient is recumbent. Traction on aural pain receptors due to a diminished CSF cushion result in the headache. Nausea, vomiting, nuchal rigidity and visual disturbances are common. A decreased intralabyrinthine pressure may result in vertigo, tinnitus and hearing loss.

The CSF opening pressure is less than 60 mm H₂O. The protein is mildly elevated (>45mg/dl) with mild pleocytosis (>5/cc) probably secondary to meningeal hyperemia.

The MR findings are characteristic in the correct clinical situation. Tonsillar herniation can also be seen with Chiari I malformations. Depression of the optic chiasm and pons can occur secondary to mass lesions, although none is present in this syndrome. The aural enhancement is a result of venous engorgement accompanying a reduced CSF volume (the Monro-Kellie rule). Dural enhancement also occurs with inflammatory conditions, leptomeningeal carcinomatosis and following craniotomy or subarachnoid hemorrhage.

SIH is self-limited, with resolution of symptoms in 2-16 weeks. Conservative therapy requires strict bed rest and analgesics. An epidural blood patch or saline infusion usually results in immediate relief. Occasionally, surgical repair of a large meningeal defect is required.

References:

1. Fishman RA, Dillon WP. Dural enhancement and cerebral displacement secondary to intracranial hypotension. *Neurology* 1995;43:609-611.
2. Pannullo SC, Reich JB, Krol G, Deck MDF, Posner JB. MRI changes in intracranial hypotension. *Neurology* 1993, 43:919-926.
3. Sell JJ, Rupp FW, Orrison WW. Iatrogenically induced intracranial hypotension syndrome. *AJR* 1995; 165:1513-1515.

Editor: Steven R. Nokes, M.D. is associated with Radiology Consultants in Little Rock.

Contributor: Robert D. Dickins, M.D. is with Neurological Surgery Associates in Little Rock.

Contributor: W. Bradley Pierce, M.D. is associated with Radiology Consultants in Little Rock.

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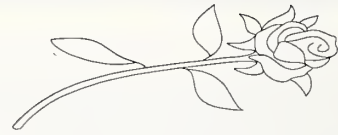


JCAHO Accredited with Commendation

In Memoriam

James Claude Barnett, M.D.

Dr. James Claude Barnett, of Heber Springs, died Friday, February 16, 1996. He was 80. Survivors include his wife, Audrey (Davis) Barnett; son, Jim Barnett; daughter, Carol Ann Barnett; brothers Elgin Barnett and Horace Barnett; sister, Addie Mae Smith; two grandchildren; and one great grandchild.



Things To Come

April 26

Management of Chronic Pain. Washington University School of Medicine, St. Louis, Missouri. Sponsored by the Division of Rheumatology and the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862 or (314) 362-6891.

April 26 - May 3

Fifty-fifth Annual American Occupational Health Conference. San Antonio Convention Center, San Antonio, Texas. Sponsored by the American College of Occupational and Environmental Medicine. For more information, call (708) 228-6850.

ARKANSAS LOCATION

May 2 - 4

Arkansas Medical Society 1996 Annual Convention. Excelsior Hotel and Statehouse Convention Center, Little Rock, Arkansas. For more information, call (501) 224-8967 or 1-800-542-1058.

May 5 - 6

Fourth Annual American Medical Association Conference on Physician Payment. La Mansion del Rio, San Antonio, Texas. For more information, call 800-621-8335.

May 13 - 24

7th Annual Tropical Health Update. Tulane University School of Public Health & Tropical Medicine, New Orleans, Louisiana. Sponsored by the Office of Continuing Education and Tulane University Medical Center. For more information, call (504) 588-5466 or 1-800-588-5300.

May 15 - 17

Beyond the Hospital: Patient-Driven Strategies to Integrate Care. Hyatt Regency at Union Station, St. Louis, Missouri. Sponsored by The Picker Institute. For more information, call (617) 667-2388.

June 6 - 9

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

July 25 - 27

Clinical Allergy for the Practicing Physician. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

Keeping Up

April 26

Acute Stroke Intervention. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

April 27 - 28

13th Annual W.W. Stead Chest Symposium. Sponsored by UAMS College of Medicine. Location: Red Apple Inn at Eden Isle, Heber Springs. Category I credit hours offered and fee: TBA.

May 9 - 10 & November 16 - 19

Surgical Treatment of Erectile Dysfunction with Penile Prosthetic Implantation. Sponsored by UAMS AHEC - Fort Smith. Location: Crawford County Memorial Hospital, Van Buren. Fee: \$350. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

May 10

Update on "Any Willing Provider." Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

May 24

The Future of Medical Education. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

May 31 - June 2

18th Annual Family Practice Intensive Review Course. Sponsored by UAMS College of Medicine, Department of Family and Community Medicine. Location: UAMS, Education II Building, Little Rock. Category I credit hours offered and fee: TBA.

June 14

Vitamins in Alternative Medicine. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

June 23 - 28

Intensive Workshop in Health Care Ethics. Sponsored by UAMS Division of Medical Humanities. Location: Freeway Medical Center, Suite 500, Little Rock. Fee: \$375 - includes all course materials, breakfast, receptions and two dinners. Category I credit hours offered: TBA. For more information, call: 501-661-7970.

June 28

Annual AHEC Fort Smith CME Seminar. Sponsored by UAMS AHEC - Fort Smith. Location: Holiday Inn, Fort Smith. Category I credit hours offered: TBA. For more information, call: 501-785-2431.

June 28

Hemodialysis Access Problems. Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1

Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conferences, Wednesday, July 3, 12:00 noon, Southwestern Bell/Arkla room.
Chest Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/ARKLA Room. Light breakfast provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, 1st Tuesday in March, May and July

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m. Terrace Restaurant, Little Rock
Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293

Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Interhospital Urology Grand Rounds, 1st Tuesday, 5:30 p.m., St. Vincent Arkla/Bell room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room three times a month, CARTI Auditorium once a month
LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GREEC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas

GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
 Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
 Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
 Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
 Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
 Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
 Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
 Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
 Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
 Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
 Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom
 AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom
 AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom
 Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville
 Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building
 Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center
 Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center
 Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.
 Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould
 Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
 Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn
 Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided
 Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn
 Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville
 Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
 Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport
 Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO
 Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro
 Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.
 Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital
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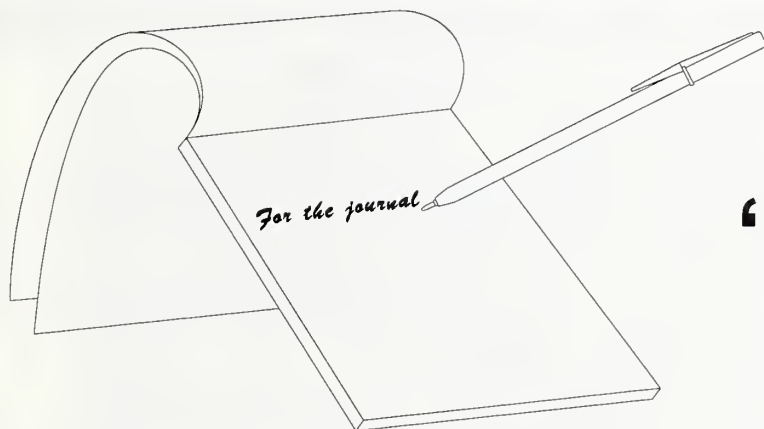


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AMS Benefits	inside front
Arkansas Blue Cross & Blue Shield	603
Arkansas Children's Hospital	back cover
Arkansas Managed Care Organization	532
Care Network	597
<i>The Alan Rothman Company, Inc.</i>	
Consumer Quote USA	inside back
Freemyer Collection System	548
Medical Protective Company	552
<i>Williams Marketing Services</i>	
The Paul Revere Life Insurance Company	586
Riverside Motors, Inc.	551
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	557
<i>Strategic Marketing</i>	
St. Vincent Infirmary Medical Center	580
<i>Frank J. Wills</i>	
State Volunteer Mutual Insurance Company	530
<i>The Maryland Group</i>	
U.S. Air Force	594
<i>BJK&E Specialized Advertising</i>	
U.S. Air Force Reserve	529
<i>HMS Partners, Inc.</i>	



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Volume 92 Number 12

May 1996

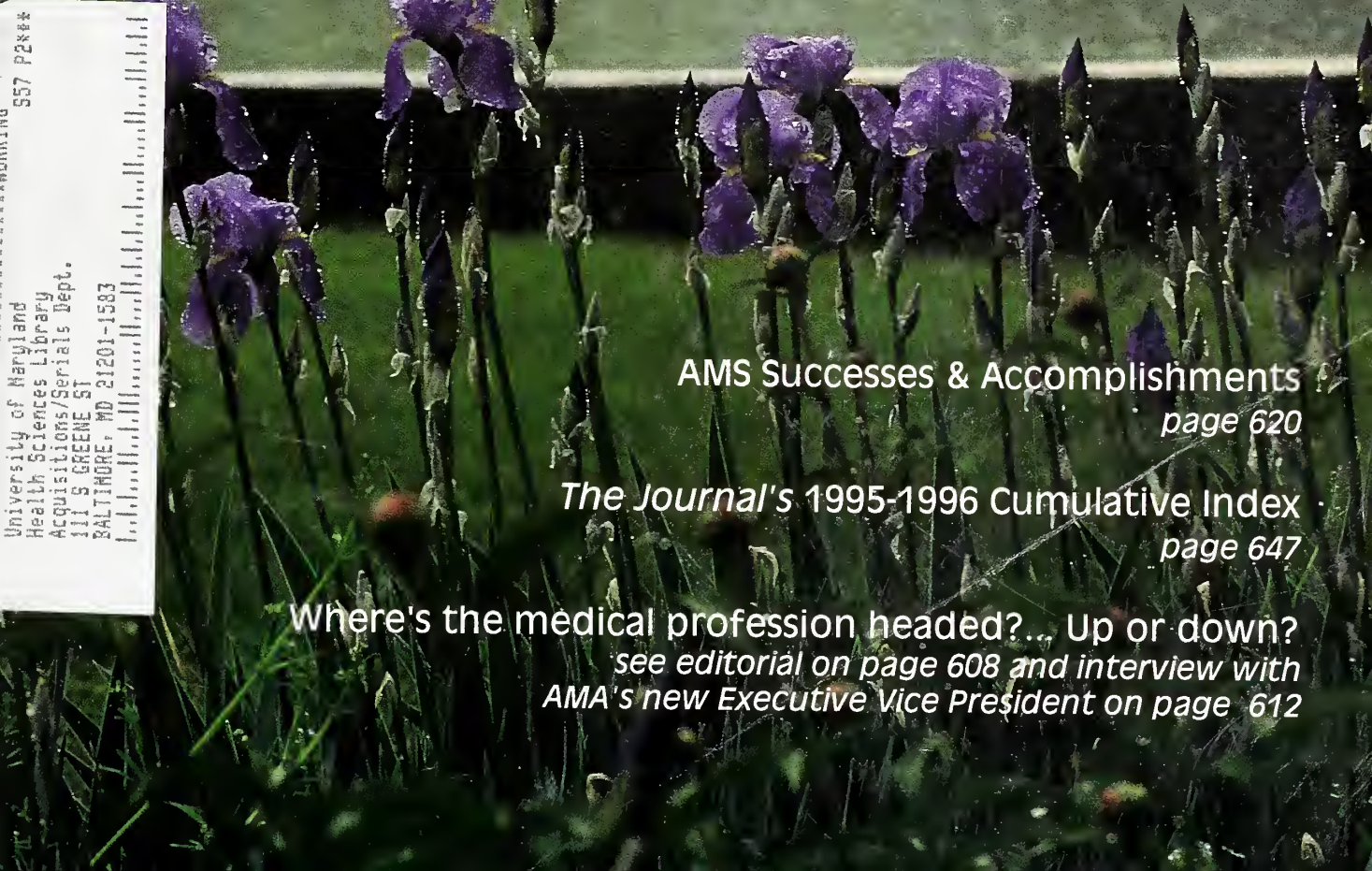
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AMS Successes & Accomplishments
page 620

The Journal's 1995-1996 Cumulative Index
page 647

Where's the medical profession headed? ... Up or down?
see editorial on page 608 and interview with
AMA's new Executive Vice President on page 612

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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 92 Number 12

May 1996

CONTENTS

FEATURES

- 608 **Good Times Are Coming**
Editorial
Samuel E. Landrum, M.D.
- 611 **Medicine in the News**
Health Care Access Foundation Update
AMA's New Exec. V.P. - People & Patients - his "foremost priority"
Interview with P. John Seward, M.D., Exec. V.P., AMA
Biomedical Information Easily Accessable through National Network
Disciplinary Action Bulletin - Arkansas State Board of Nursing
- 617 **The Cooperative Cardiovascular Project - an AFMC Special Report**
Special Report
William E. Golden, M.D.
Nena Sanchez, M.S.
- 620 **AMS Successes & Accomplishments**
- 623 **Pertussis in Arkansas**
Scientific Article
Eugene Lu, M.D.
Russell S. Kirby, Ph.D.
Gordon E. Schutze, M.D.
- 647 **Cumulative Index, Volume 92, Numbers 1-12**

In the next issue of The Journal:

Meet Dr. John Crenshaw, AMS's 1996-1997 President, and catch the AMS Annual Session excitement in the President's Post-convention issue in June.

DEPARTMENTS

- 615 **AMS Newsmakers**
629 **Cardiology Commentary & Update**
633 **State Health Watch**
636 **Arkansas HIV/AIDS Report**
638 **New Members**
639 **Radiological Case of the Month**
641 **In Memoriam/Resolutions**
642 **Things to Come**
643 **Keeping Up**

Cover photograph taken by A. C. Haralson, Arkansas Department of Parks & Tourism.

Good Times Are Coming

Samuel E. Landrum, M.D., F.A.C.S.*

"These are the best of times," says the optimist.

"I'm afraid you are right," replies the pessimist.

Gratitude for the many medical improvements during my career leads me to consider the future in more optimistic terms than current reports, opinions, and predictions suggest. When interning, I read an article predicting what surgical practice ten years later would be. The writer very forcefully, and incorrectly, predicted that there would be no operations for cancer because vaccines would be developed that would prevent malignancies. The American diet would change so that there would be no need for gallstone surgery. Also, it was to be expected that antibiotics would control infections so there would be no need for appendectomies, resections for diverticulitis, or other infectious processes of a surgical nature. I was lead to believe that surgical care ten years later would be only for congenital deformities, trauma, and transplantation.

Reading that article forty years ago impressed on me that perhaps I was seeking a residency in a field that would be mostly obsolete in only ten years. I don't think the author knew how inventive surgeons are in developing new procedures. It is true that corrections of anomalies, traumatic disruptions, and the transplant operations have become bona fide accepted procedures. However, community surgeons still perform just about all the operations that made up the majority of the schedule when I was a resident. The antacid medicines recently used have greatly reduced the frequency of gastric operations that were routine forty years ago, but this is more than counterbalanced with the development of vascular surgery and a myriad of procedures by surgical specialists that were not in anyone's dreams then.

The polio vaccine was announced when we students were in class, and it brought our hearts a swelling of joy similar to the great feelings experienced when

the Hogs won the NCAA Championship. Similarly, we were exhilarated when a professor told our class that it had just been found that corticosteroid therapy was allowing children with leukemia to live six months instead of dying in a very few weeks.

With this lengthy prelude, consider some of the good things that I believe will come along soon to the benefit of patients and surprisingly to the pleasure of practicing physicians.

Diagnostic methods in laboratory and imaging modalities will continue to improve to detect serious diseases earlier. For some malignancies, gene identification or tumor markers will permit treating patients who have no overt disease by current diagnostic methods. Consider how good mammography has impacted the health of women. Other tumor systems will be amenable to earlier expression that we now know. The mortality rate from breast cancer is being reduced by these newer approaches and newer therapies applied in the proper sequence. We surely need a similar breakthrough for pancreatic and lung cancers, and promising results are recently being reported by some centers regarding pancreatic tumors.

The currently perceived horror of managed care will be found to be a beneficial change because it can challenge us intellectually to be the best that we can in reaching a diagnosis without getting reams of laboratory studies and repetitious imaging. How long will it be before there is no safe place to dispose of all those diagnostic isotopes that we infuse into our patients? A common problem is the patient with obstructive jaundice who usually has ultrasound, CT scan, hepatobiliary scan, ERCP, and percutaneous transhepatic cholangiogram, in addition to a few days of repeated blood studies before the value of consulting a surgeon is considered. For most of these patients, ultrasound study, lab work, and an operation yield the most effective results. A less common problem is a thyroid nodule. Nearly all of these patients have TSH, a full panel of thyroid blood studies, a

* Dr. Landrum is affiliated with Holt-Krock Clinic in Fort Smith and is a member of the editorial board for *The Journal of the Arkansas Medical Society*.

radioisotope scan of the thyroid, and an ultra-sound examination of the thyroid before referral for surgical opinion. In essence, all they need in addition to history and physical examination are TSH, T3, and perhaps fine needle aspiration with cytological study of the nodule. These much less expensive tests will nearly always guide one to a correct treatment.

Improvement in transportation will continue to enhance the referral of patients with difficult problems to centers with experience who have demonstrated better results. Operable pancreatic cancers or patients in need of hepatic transplantation are two challenges that come to mind. We must accept, indeed applaud, the centers that have achieved good outcomes with major burns, catastrophic children's lesions and similar cases that exceed the capability of most community hospitals. Referral of such patients from our local practices should not be thought to lessen one's stature professionally; it should be gratifying to see these patients often returning very much restored.

The physical impact of operations will continue to be diminished. Small incisions for minimally invasive procedures have made surgeons and patients alike much happier with this steadily enlarging field of practice. The operations may take a little longer, but post-op rounds are certainly fewer; and most surgeons prefer to be operating more than rounding. Another example is the stereotactic needle core biopsy of suspicious mammographic shadows. This is expanding to permit the removal of small lesions completely without the use of the traditional incision. Also it has reduced the cost of a diagnostic biopsy by half, and ultra-sound guided needle core breast biopsies are even less costly.

Gatekeepers will likely disappear when it becomes realized by payors that patients can select needed care by specialists about as accurately as can doctors. Needed care will not be delayed by a physician's concern that part of one's income will be reduced if the

patient goes directly for the necessary services of a specialist. At the risk of sounding like an elitist, it seems there are a wide array of problems that are treated better by a specialist initially. Also, all of us will applaud the disappearance of all those referral slips that take up so much of the time of a primary care physician.

The diminishing voice of national and probably state medical organizations will shrink more. It is a myth nowadays to talk of medicine being a unified profession. There is too much concern about what piece of the economic pie each segment of practicing physicians may seek to even think that we shall be able to speak as one. However, as the compensation for the several participants is slowly evolved for the individual member of a panel or group of doctors; it seems likely there will be restored a collegiality and sense of unity within that group; and I suspect these groups will be much larger than we can think now.

One expectation I have is that the care of children in this country will be much better and certainly more available. The compensation for those who practice in the profession dealing with children will be much higher proportionally to other fees. We do not consider the relative benefit to society overall of proper immunizations, restorative operations, and care in health and sicknesses of children with many years of expected survival compared to the frequent expensive operations, medicines, and long term care given to the old where the expected survival is months or a few years. Will we wait until medical care is truly rationed, or will we need to wait for the second term of Pres. Hillary Clinton to get a better deal for youngsters?

Many things I think may happen for the good may not, and some will surely not be as much for the good as I think they will. The only sure thing I can predict medically is that the mortality rate will remain just a little over 100% because only a few of us will get a second life after successful CPR. So there you are.

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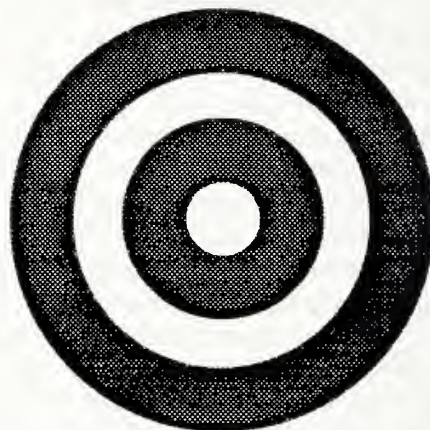
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Medicine in the News

Health Care Access Foundation

As of April 1, 1996, the Arkansas Health Care Access Foundation has provided free medical service to 10,810 medically indigent persons, received 19,778 applications and enrolled 39,111 persons. This program has 1,722 volunteer health care professionals including medical doctors, dentists, hospitals, home health agencies and pharmacists. These providers have rendered free treatment in 69 of the 75 counties.

AMA's New Executive Vice President

People and Patients -- his "foremost priority"

If the position of Executive Vice President of the American Medical Association continues to be as demanding as it was under former EVP James S. Todd, M.D., then P. John Seward, M.D., should do well in it, or so say many who have known and worked with him and who call themselves "privileged" to be his friend.

The job of EVP is "an uncommon one," according to Dr. Todd, who held the office for six years. "It's an all-consuming position with the need for multiple abilities to deal with politics, science, education, finances and a constituency. It's not placid. You're never fully prepared for it."

But from physician to police detective to English teacher, Dr. Seward's friends describe the new EVP as a man who is part farm boy but cloaked in layers of scholarship, professionalism, and political savvy, and who is always the dedicated physician that he planned to be since the first grade at Francis Willard Elementary School in Rock Island, Illinois.

"It was probably our mother's long, chronic illness that influenced John to be a doctor. He knew from that time what he wanted to be," says Dr. Seward's sister and only sibling, Mrs. Ann Robinson, of Macomb, Illinois, an artist and retired English teacher. "We always hung together. Later, when our families were young, though we were living 100 miles apart, if a kid was sick or fell out of a tree, he was always there with sympathy and advice. He's always been a good listener."

Others echo that theme. "He is perceptive; he has a brightness and a quickness to size up situations and individuals," says William R. Felts, M.D., who chaired the AMA Council on Legislation during Dr. Seward's early days as a Council member, and who credits Dr. Seward with "an almost innate ability to identify phonies." Dr. Felts, now Professor Emeritus at George Washington University Medical School, also extols Dr. Seward's dependability. "Count on him to do what he

says. But above all he has a very, very high level of integrity. He's a really unique individual!"

"Doc Seward's a natural, born leader," says former Chief of Detectives, Gene Coots, of Winnebago County, Illinois, "He's always bringing people together, synergistically. He just knows how to do it and he's the best at it that I ever knew."

Detective Coots knows John Seward as few people do. They spent long, often tedious, sometimes harrowing, hours together as Dr. Seward fulfilled the role of Winnebago County Coroner. During the miserable times, it was Dr. Seward's companionship and sense of humor that brought the law officers through and "made the events memorable" for Coots. "Like the evening I was at a retirement party when Doc called me away because a body had been discovered near the cemetery. It was miserable weather and the body was found along the river bank. John realized it was an American Indian, buried 150 years ago. We spent half the night digging there, and sent the remains to the Smithsonian. Doc knew I'd missed a steak dinner. He kept promising to buy me a steak for breakfast but the best he could do after midnight was a plate of ham and eggs. Or the Christmas Day we left our families to determine why x-rays of a murder victim showed a number of pellets we hadn't expected to find there. Doc was so methodical, he went through old hospital records half the night, eating Big Macs and cold fries while our families had a more traditional meal. He finally discovered ... [a prior wounding] when the victim wouldn't let them take the pellets out. Doc will work 'til he drops and he knows how to demand things of others and make them want to succeed. And the good of his staff is always on his mind."

The good-natured give-and-take of the Coroner's office once found Dr. Seward remarkably on the receiving end. On his 50th birthday, wife Dusty, his sister Ann and friends planned a surprise party for him that has to stand as a bench mark for surprise events. "We rented a restaurant hall in an old neighborhood of Rockford," Ann Robinson recalls. City and Sheriff's police were in on it. "The Deputy Coroner called John and said there had been a multiple mob slaying there. All the guests were lying on the ground, their outlines chalked on the floor, when the Coroner burst in. He was shouting, 'Don't anybody touch anything!' then the lights came up and the "victims" began to move. John was delighted with the way that we had set him up."

Well, naturally. A love of dramatics is an important side of P. John Seward. Many who frequented Rock Island's Community Theater still remember

Seward as Falstaff in Shakespeare's "Henry IV" -- or as Lennie, in Steinbeck's "Of Mice and Men." Then there was the two-hour one man show he did at the Medical School theater in Rockford, Illinois, with portrayals of the great speeches of the English language. "He could pitch his voice to the high tones of Abraham Lincoln," remembers Gene Coots, "or give you that Winston Churchill growl. But compliment him on an amazing performance and he won't go for any ego trips. He'll just say, "Oh, YOU could do that, just as well!"

The many parts of the man go together to make "the consummate politician," says retired Family Physician Charles Hair, M.D., of Santa Paula, California, once Dr. Seward's Vice Chair on the Council on Legislation. "He's a farm boy whose expressed naivete is belied by his common sense, political savvy and silver tongue," says Dr. Hair. "Out of this farm boy come soliloquies that are beautiful to hear, but always he's the dedicated family practitioner. Patients always were - and always will be -- his foremost priority."

Dr. Seward's friends agree that his unique combination of qualities and talents will continue to benefit the AMA. "He listens, he's receptive, keeps others in mind and can persuade without becoming confrontational," says Ann Robinson. "He'll continue to be the patients' advocate, while again proving himself a very effective manager," says Dr. Hair. "Colin Powell reminds me of Doc," Gene Coots believes. "He's concerned about the right things, about morality. He rises to leadership almost reluctantly but he's the epitome of leadership -- nothing soft. He's loyal and unpretentious, and has quite an effect on people." "He's very capable and deserving," says Dr. Felts. "He'll make a great EVP!"

Former EVP Dr. Jim Todd agrees. "John's strengths are in building consensus. He understands the political process. He has management experience. I don't think he's grasped the magnitude of what he's gotten himself into -- but he's got all the attributes necessary!"

Interview with P. John Seward, M.D., Executive Vice President, American Medical Association

Q. What is your vision for the AMA?

A. To continue to reinforce our role as the primary national advocate for patients and physicians. In the most fundamental way, that is what medicine is all about. And the AMA can act on behalf of millions of patients. We continue in a good position to do this. We are financially secure and programmatically sound. We are strongly positioned as medicine's leader, and I see us continuing in that role.

Q. How has your background prepared you for your current role as EVP?

A. I was a practicing doctor, with all the joys, problems, hassles, and tears that practicing medicine brings. I've also been the manager of a number of successful business enterprises and a longtime public official. All of this and my service as member and chair of the AMA has given me enormous experience and perspective for assuming this new role.

Q. Some physicians are reluctant to join the AMA because they don't believe it represents their interests. What will you do about that?

A. The AMA currently represents physicians' interests. We have represented physicians in Washington on issues of health system reform, Medicare and professional liability, we have led the charge in public health issues such as domestic violence and tobacco, and we are currently evaluating the Federation and how it can better serve the needs of physicians and their patients. If physicians don't believe we are representing their interests, then we have to look at how we are delivering our message. We need to articulate and communicate the value of membership in a better way.

Q. More and more women and minorities are becoming physicians. What is their incentive to join the AMA?

A. These are physicians whose talents and dedication will make health care better for all of us. Their incentive to join is representation and a chance to be an active participant in the changes in Medicine as we prepare for the 21st century. We have a woman chair, Nancy Dickey, M.D., for the first time in AMA history. We have Palma Formica, M.D. and Regina Benjamin, M.D., on the Board. We are seeing an increase in membership among minorities and international medical graduates because we are seen as a solution to the hassles that they are facing.

Q. The Federation study suggests changes in representation from state, county, and specialty societies. Will these changes significantly affect membership?

A. The AMA is a dynamic organization. We have been changing for years. The Federation study is just part of that change. The purpose of the Federation study is to give practicing physicians input in how their societies make policy so that they do not feel shut out. I believe that membership will increase as a result of the study.

Q. How will the AMA help doctors educate patients about changes in Medicare and Medicaid?

A. We will work with the media -- sending our Board members to editorial boards and radio and TV stations across the country to broadcast our message. We will provide members with updates on all our Medicare activities as we implement them. As we have always done, we will listen to physician input about our policies and work with America's physicians to bring about the best in health care for their patients.

Q. Will the AMA continue public education and awareness programs on tobacco and domestic violence and other public health activities?

A. Definitely. Public education and public health have been major AMA activities since our founding 150 years ago. As a Florida newspaper editorial said, maybe we don't really need a U.S. Surgeon General as long as the AMA is around. The AMA is a recognized voice in public health issues and we take that responsibility very seriously. How will the AMA help physicians gain more control over their careers and the care of their patients during this time of change in physician's practice environments? By continuing to inform physicians about our actions in Washington, about the environment in which they practice and about the best ways in which they can take control of their medical practice.

Q. What are AMA's 1996 legislative and political goals?

A. We will still be concerned with the issues we pursued in 1995. Last year was very busy, legislatively. We staked out our territory and stuck to it: Medicare, liability reform, doing away with hassles like Stark I and Stark II, CLIA and patient protections. We made tremendous headway. That agenda is still as cogent for 1996 as it was for 1995. If anything, the need to accomplish it is even higher. Just getting close doesn't excite me much. Now we have to say—"we can do it!"

Q. You were the elected county coroner for 23 years. How did that prepare you for AMA leadership?

A. An old friend of mine taught me that good politics is good service, and good service is good politics. You had to earn their trust every day. It humbled me. It taught me to keep an open mind. Any time I jumped to conclusions, I was absolutely wrong. Team work is also very important; you can't do it alone. I look at this job the same way. An EVP isn't supposed to be a hero. If anything, I would classify myself as a "designer" of bringing people together, helping inspire our team to do a better job.

Q. How do you see the practice of medicine changing?

A. Medicine in some ways hasn't changed at all. It's still about providing the best care to individual patients. In other ways, it's changing hugely in what we can do for those patients. The cost of health care will continue to be a major issue. Anytime you upgrade, you create new concerns, specifically ethical ones. Will our ethics be able to keep up with how we apply technology to our practices? As professionals, we have to be leaders in this because it's our duty. The AMA has to help our physicians say, yes, we are still on course, but we are also advancing.

Q. How will the AMA work to overcome the loss of collegiality and unite physicians in the future?

A. I'm an eternal optimist. Is collegiality irretrievably lost? I don't think so. As physicians, we all have so

much in common -our devotion to medicine and to our patients, and the problems that affect us all in the practice of medicine. I'm confident that we have the motivation and the desire to work together. When you talk to physicians who are saddened, anxious and depressed, it doesn't matter what type of health care delivery system they're practicing in, they are still physicians. This is where the AMA can be the catalyst to re-define who and what we are. To show we all need to work together. This is a legacy issue. I want to make sure we leave the profession better off than what we found it. This is how I want to be measured.

Q. How will your role differ from your predecessors?

A. I'm different and the times are different. The information age has brought everybody closer. When somebody sneezes in Seoul, Korea, it affects me in Rockford, Illinois. It's the same medicine. The AMA must continue to be better focused, more receptive, more efficient. We do not have the luxury of contemplation and inaction. We have to be faster on our feet.

Q. What about Medicare reform?

A. The AMA is committed to transforming Medicare. We'll stay the course. All those proposals we gave to Congress are still on the agenda. Patient choice. Quality of care. Physician-sponsored networks. Patient protection, medical liability, reform, relief from Stark I and Stark II, CLIA.

Q. What about Medicaid Reform?

A. We want to make sure this vulnerable group receives adequate and appropriate care. They're patients. They're also family, neighbors, and friends. Standards have to be maintained to make sure that they DO obtain care, whether it's by "block grants" or some other mechanism. We also have to consider long term care. On this and so many other critical issues, the AMA has to be a watchdog. We have to help define the road the country needs to take if all our patients are to get the care they need. - *Article and interview provided by the AMA FED-NET, April 8, 1996.*

Biomedical Information Easily Accessable through National Network

The National Network of Libraries of Medicine (NN/LM), formerly the Regional Medical Library Program, serves all health professionals - physicians in all specialties, clinicians, allied health professionals, researchers, administrators, students, hospital CEO's, dentists, nurses, pharmacists - who need access to biomedical information. Established in the Medical Library Assistance Act of 1965, this Network of libraries has matured into a thriving organization consisting of 3,600 primary access libraries, 146 resource libraries, 8 regional libraries and The National Library of Medicine. For information on NN/LM programs and services in your region, call: 1-800-338-7657.

Disciplinary Action Bulletin - Arkansas State Board of Nursing

The nurses listed in this bulletin have had disciplinary action taken against their licenses. When a nurse's license to practice nursing is revoked or suspended, return of the license to the Board Office is requested; however, licenses may not be returned. Also, individuals placed on probation must continue to meet conditions for the retention, or future reinstatement, of their licenses. When hiring such an individual the Board office should be contacted. Therefore, we routinely suggest this list be shared with the appropriate supervisory personnel and recruiters in your agency.

At the completion of the disciplinary period, the nurse applies for reinstatement, which is contingent upon meeting the conditions set forth by the Board.

In accordance with the Arkansas Nurse Practice Act and the Arkansas Administrative Procedure Act, the Arkansas State Board of Nursing took the following action after individual hearings:

DISCIPLINARY:

February 7, 1996

- * Larry Dudley Avery, LPN 25878 (Nashville) Consent Agreement Probation - 3 years
- * Martha Ann Sorrells Allen, LPTN 1425 (Little Rock) Suspension - 5 years
- * Sunderland Marie Weiland Lippert, RN 12541 (Land O' Lakes, FL) Suspension - 3 years

March 5, 1996

- * Gary Don Kelly, RN 37171 (Ft. Smith) REVOKED (Broke Probation)
- * Michael Alexander Stokes, LPN 19293 (Little Rock) REVOKED
- * Carol Shawn Crowley Jones, RN 24553 (Van Buren) Probation - 2 years
- * Hope Raenell Stafford Russell, LPN 15467 (Ashdown) Suspension - 2 years (Broke Probation)
- * Juana Grissom Wallace, LPN 23985 (St. Louis, MO) Suspension - 2 years (Broke Probation)

March 6, 1996

- * Michael Day Aylett, RN 37777/LPN 20942 (Nashville) Suspension - 6 months (Broke Probation)
- * Florance Mae Winston Parish, LPN 16692 (Pine Bluff) Probation - 2 years
- * Sharon Lynn Vickers, RNP 668/RN 18107 (Jonesboro) Suspension - 3 years (Broke Probation)

April 3, 1996

- * Nanci Carol Tilley Snow, LPN 21499 (Searcy) Probation - 18 months
- * Linda Faye Kesterson Smith, LPN 15816 (Nashville) Suspension - 1 year
- * Barry Russell West, Jr., RN 39866 (Fayetteville) Suspension - 2 years
- * Theresa Ann Lewis Bradley, LPN 27779 (Hot Springs) Suspension - 2 years

April 4, 1996

- * Tracy Lynn Perry, IMPOSTER - Does not possess LPN license (Hot Springs) Fined \$1,000
- * Raymond Gene Grieves, LPN 30499 (Fayetteville) Suspension - 2 years
- * Grace Loraine Dodd Anderson Stephens, RN 40262 (Fayetteville) Suspension - 1 year
- * Rhonda Lynn Sumter, LPN 30971 (Fayetteville) Suspension - 2 years
- * Jodie Karen Eyerman Al-Jafari Lamora, RN 32615 (Ft. Smith) Probation - 2 years and fined \$500

OFF PROBATION:

- * Sandra Glenn, RN 40042 (Ft. Smith) Feb. 22, 1996
- * Paul Dodd, LPN 29984 (Harrison) March 19, 1996
- * Dobbie Kay Hamblen Shelton, RNP 1212/RN 36313 (Marked Tree) March 19, 1996

ENDORSEMENT DENIED:

- * Ruby Davis Eastep (Romance)

LETTER OF REPRIMAND:

- * Leah Kathryn Tedder Stone, RN 43505 (Springdale) March 19, 1996
- * Melody Teresa Morrison Tedford, RNP 729/RN 30631 (Little Rock) March 26, 1996

CONSENT AGREEMENT:

- * Deborah Lea (Debra Lee) Powell, RN 44419 (Little Rock) 2 years probation
- * Melissa Ann Wall, RN 22583 (Benton) 18 mths probation
- * Joann Adams Richard, RN 36286 (Ft. Smith) 18 months probation
- * Suzanne Franks, RN 33164 (Texarkana, TX) 2 years probation
- * Katherine Lee Wagner Yother Nirenberg, LPN 21572 (Jacksonville) 1 year probation

VOLUNTARY SURRENDER:

- * John Owen Jackson, RN 18232, CRNA 391 (West Memphis) January 16, 1996
- * Harold Leonard Wamhoff, RN 30921, CRNA 520 (Hot Springs) January 25, 1996
- * Benna Renia Young Christian, LPN 19370 (Rison) Jan. 24, 1996
- * Janet Lynette Simon, LPN 19305 (Omaha, NE) Jan. 29, 1996
- * Carol Jean Ivanhoe, LPN 9634 (Rogers) Feb. 26, 1996

ALERT:

If you have employed the following nurse or have any knowledge of their whereabouts, please notify the Board of Nursing.

- * Denise Rochelle Segal Grafelman, Temp. Permit 457-39-2336
- * Kryste Meschell Creech Powell, LPN 29853 (expires 9/96)
- * Laurie Angela Henry Smith, LPN 29135 (expires 11/96)
- * Judy Frances Beaver Smith, LPN 14377 (expires 8/96)

AMS Newsmakers



Michael J. Cross, M.D.

Dr. Michael J. Cross, of Fayetteville, was recently selected into active membership in the Society of Surgical Oncology at the 49th Cancer Symposium in Atlanta, Georgia. He is one of five active members from the state of Arkansas to be involved in the society. Membership is based on publications, surgical oncology practice and extended academic training.

Dr. Dennis O. Davidson, a family practitioner in Batesville, has been recognized for quality laboratory services by meeting all criteria for accreditation by the Commission on Office Laboratory Accreditation. Accreditation is given only to laboratories that apply rigid standards of quality in day-to-day operations, demonstrate continued accuracy in the performance of proficiency testing and pass a rigorous on-site lab survey.

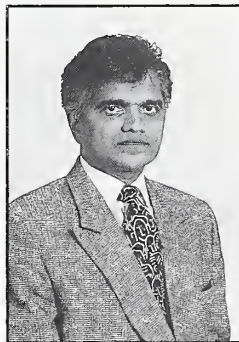
Dr. Jerry Mann and **Dr. Michael Miller**, both of Little Rock, recently participated in a "Free to Ask, Free to Learn" lecture via an interactive telecommunications system linking UAMS with the town of McGehee. The two-way audio and video communication allowed the participants and healthcare specialists to see each other and ask questions and receive answers. Dr. Mann spoke about hepatitis and Dr. Miller talked about osteoporosis. Each physician's 30-minute lecture was followed by an hour of questions and answers.

Dr. Stephen Shorts, an otorhinolaryngologist in Pine Bluff, recently spoke on the function and care of the auditory system during a special series titled, "The Doctor Is In," at the Arts and Science Center for Southeast Arkansas.



James M. Arthur, M.D.

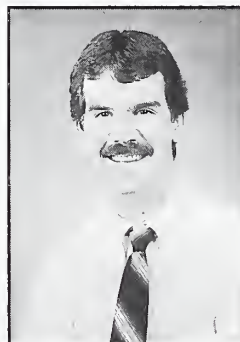
The following physicians were recently elected as medical staff officers at St. Joseph's Regional Health Center in Hot Springs. **Dr. Kumar Maruther**, an internal medicine specialist was elected chief of staff; **Dr. Robert J. Olive**, an orthopedic surgeon, was selected as chief-elect; **Dr. James M. Arthur**, a neurological surgeon, will serve as immediate past chief; and



Kumar Maruther, M.D.



Mark B. Robbins, M.D.



John W. Sorrels, M.D.



Charles C. Wright, M.D.

Dr. Mark B. Robbins, a radiologist, was elected secretary of the medical staff. Elected by the medical staff, officers serve as members of the 1996 Executive Committee along with department chairmen.

In addition, St. Joseph's Regional Health Center's medical staff departments recently selected 1996 chairmen. **Dr. Charles C. Wright**, a specialist in urological surgery, was elected chairman of the department of surgery, and **Dr. John W. Sorrels**, an internal medicine specialist, was elected chief of medicine.

The Physician's Recognition Award is awarded each month to physicians who have completed acceptable programs of continuing education. Recipients for the month of March 1996 are: James D. Armstrong, Ashdown; Clarence Ervin Ballard, Little Rock; Steven F. Collier, Augusta; Robert D. Foster, Mountain Home; F. Perry Franz, Fort Smith; George A. Hobby, Paragould; James P. Jackson, Little Rock; Kenneth B. Jones, Jonesboro; William N. Jones, Little Rock; John A. Mallory, Little Rock; Joseph A. Norton, Little Rock; Kevin L. Pope, Fayetteville; Carl J. Raque, Little Rock; Philip B. Tippin, Danville; C. Eugene Watermann, Hot Springs National Park; and Harold F. Wilson, Monticello.

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The Cooperative Cardiovascular Project

An AFMC Special Report

William E. Golden, M.D.*

Nena Sanchez, M.S.**

Under the Health Care Quality Improvement Program, the Arkansas Foundation for Medical Care has developed local projects to assist hospitals statewide in assessing and designing efforts to better the health care of Arkansas patients. Similarly, the Health Care Financing Administration (HCFA) has developed a methodology to implement national quality improvement projects on selected topics. This article communicates data associated with HCFA's first national project -- the Cooperative Cardiovascular Project (CCP) -- which deals with the care of patients who suffer an acute myocardial infarction.

Numerous clinical trials have brought about progress in the diagnosis and treatment of myocardial infarction. With the assistance of many national specialty societies, HCFA reviewed guidelines from the American Heart Association and assessed research findings to create review criteria for the care of acute infarction. Algorithms to assess the processes of care for heart attack patients have identified ideal cases for which certain care modalities should be delivered. After pilot testing in four states (Alabama, Iowa, Connecticut, and Wisconsin) this project is now in national operation. Data on 100% of acute MIs occurring in Medicare patients hospitalized during an eight month period have been abstracted by one of two National Clinical Data Abstraction Centers (CDACs).

The following material highlights the critical elements of this nationwide practice assessment.

1. Reperfusion - Not all patients are ideal candidates for acute thrombolysis or angioplasty. Nevertheless, each institution should have in place plans or protocols to rapidly assess patients who have chest pain or the diagnostic possibility of an acute myocardial infarction so established interventional therapy can be delivered on a timely basis.

Clearly, the sooner a patient receives thrombolysis or angioplasty in the face of an acute MI, the greater

the likelihood of preserving myocardial tissue. While this intervention should occur within six hours under ideal circumstances, benefits accrue even as late as 12 hours after the start of the heart attack.

Hospitals that routinely assess patients with MI and transfer them for additional care should establish emergency department protocols that allow for rapid diagnosis of chest pain and the administration of thrombolytic drugs when appropriate. **"Door to drug" time should be as short as possible.** The national average is 72 minutes, with the National Heart Attack Alert Program suggesting a 30-minute goal. Subsequent rapid transfer to a cardiac care facility should also be included in the overall planning. The rapid provision of thrombolytic drugs should be facilitated by standard institutional procedures rather than a special "critical" response.

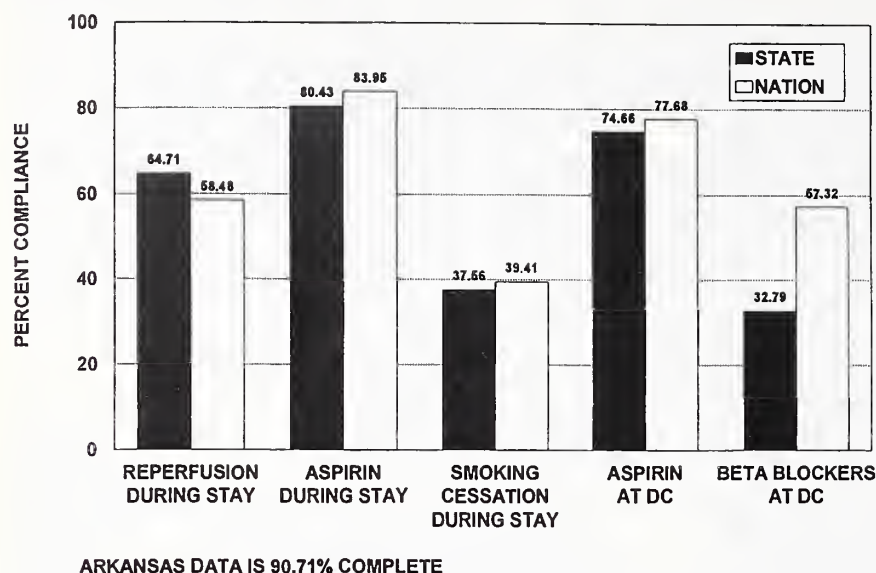
Data from the available Arkansas sample (91% complete) demonstrated that 65% of ideal patients in our state received reperfusion therapy, as opposed to 58% in the nationwide sample (Table 1). Differences were minimal between the state and the nation in terms of potentially eligible patients receiving reperfusion therapy (approximately 20%). Arkansas patients received thrombolysis at similar time intervals in comparison to the national sample. Over 20% of patients received thrombolytics more than 120 minutes after arrival to the hospital (Table 1). On the other hand, Arkansas patients who received PTCA did so faster than patients in the national sample. While this data is encouraging, improvements in reperfusion delivery could occur with additional focused attention.

2. Aspirin - One of the more gratifying findings of the past 15 years is the effectiveness of a common and inexpensive medication to reduce cardiac mortality. Aspirin in the dose of only 325 mg a day (and possibly less) can dramatically reduce subsequent myocardial infarction in patients who have suffered an ischemic event. It should be given in doses of 160 mg to patients as early as possible after the diagnosis of the infarction. Data have shown that the effects of thrombolysis and aspirin are additive; while either alone reduces mortality 25%, the two medications in combination

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** Nena Sanchez, M.S., is Senior Statistician at the Arkansas Foundation for Medical Care, Inc.

Table 1: CCP Indicators in Ideal Candidates



properties, are not recommended as first line drugs for MI patients. Examples of ISA-beta blockers are: Acebutolol (Sectrol), Carteolol (Cartrol), Penbutolol (Levatol), and Pindolol (Visken).

Arkansas care for myocardial infarction patients did not compare very well to the national sample in the use of beta blockers at discharge. Only one-third of Arkansas' ideal patients, as opposed to 57% of ideal patients in the national sample, received beta blockade at the time of discharge (Table 1). "Good" and "eligible" patients were similarly low (under 30%) in Arkansas. This is clearly one area in the Cardiovascular Cooperative Project in which trends in Arkansas fall behind national use.

reduce mortality by nearly 35%. This significant improvement strongly supports the administration of an aspirin to a patient in an emergency room at the earliest period after diagnosis of an acute MI.

All patients who have suffered a myocardial infarction who can tolerate an aspirin a day should be on this medication at discharge. Data support that one aspirin a day should have minimal impact on the gastrointestinal tract.

Arkansas patients received aspirin upon discharge at rates similar to the national sample. Use of aspirin upon admission, however, was statistically significantly lower than the national sample, particularly in smaller, rural hospitals.

This use of aspirin in the first few hours of MI therapy could be improved by attention to drug delivery and protocols in emergency room settings. In addition, over 20% of ideal patients and over 30% of eligible patients did not receive aspirin at discharge from the hospital (Table 1). Some of this problem might reflect documentation, but on the other hand this inexpensive and valuable intervention could be offered to more patients.

3. Beta Blockade - There is strong evidence that non-ISA beta blockers improve long term survival of MI victims and therefore should be the drug of first choice as a keystone in their long-term management. Contrary to popular belief there is no strong evidence that beta blockade promotes depression or worsens well-being in elderly patients. However, patients with diminished pulmonary reserve or severely impaired ventricular function are not ideal candidates for beta blockers. ISA (Intrinsic Sympathomimetic Activity) beta blockers, which possess both stimulant and antagonistic

4. Smoking Cessation - There is little argument among health care workers that cigarette smoking is a major risk factor for cardiac and pulmonary disease. Documentation of counseling patients to quit smoking is a useful indicator to demonstrate a commitment to the promotion of this intervention that assists patients in their long-term health. Documentation of smoking cessation in ideal patients only occurred in 38% of patients as opposed to 39% in the national sample (Table 1).

5. CHF Data - The Cooperative Cardiovascular Project also focuses on interventions at discharge for patients with low ejection fraction. These parameters include the avoidance of calcium channel blockers, which can worsen myocardial performance, and the early use of angiotensin converting enzyme (ACE) inhibitors in patients whose ejection fractions are under 40%. A recent AHCPR guideline on congestive heart failure underscores the importance of early use of this intervention. AFMC plans to develop a separate HCQIP letter on the treatment of patients with congestive heart failure as a follow up of this initial CCP report. This follow up will incorporate data from the CCP project on ACE inhibitors and calcium channel blocker therapies as well as recommendations from the AHCPR and the American Heart Association.

Summary

Patients who suffer myocardial infarction can have improved outcomes if the following elements are part of their treatment plans:

1. Rapid diagnosis of the condition.
2. Use of thrombolytics or angioplasty early in the presentation, if appropriate.
3. Use of aspirin early in the course of care.

4. Discharge medications of aspirin and beta blockade, in appropriately selected patients.
5. Documentation of efforts to counsel the patient to quit smoking.

The above material outlines the key indicators in the national project to improve care for heart attack victims. Hospitals should assess the diagnosis, immediate care, and long-term management of patients with this condition. Patients have a variety of comorbidities and do not always fit into a simplified therapeutic scheme. Nevertheless, the care of myocardial infarction victims in the pilot CCP states demonstrated that a sizable number of these patients could benefit from a more focused approach to the above therapeutic interventions.

Suggestions

1. Hospitals should design protocols or care plans to expedite the care for patients diagnosed with acute myocardial infarction.
2. Hospitals should measure the door to provision time for the delivery of reperfusion therapy (thrombolytic or angioplasty). Hospitals that transfer acute MI patients for additional care should be able to begin thrombolytic therapy prior to transport.
3. Hospitals should monitor the rapid provision of aspirin at the time of diagnosis of acute MI, as well as the prescription of aspirin at the time of discharge.
 - 4a. Hospitals should monitor the documentation of smoking cessation counseling to all relevant acute infarction patients.
 - 4b. Hospitals should evaluate the quality of smoking cessation counseling in their overall cardiac rehabilitation program.
5. Hospitals should monitor the appropriate provision of long-term beta blocker therapy to acute MI patients upon discharge.

As in previous projects, AFMC stands ready to assist institutions with applying these practice guidelines in their local settings. We hope this aids your internal benchmarking efforts, as well as external standard setting, to help local decision makers make appropriate therapeutic changes.

We also have model data abstraction tools for those facilities interested in collecting their own information for ongoing local quality improvement projects. Institutions looking for templates to assist them in making appropriate structure and process changes to improve care might benefit from discussing how other facilities have organized their treatment plans for myocardial infarctions.

AFMC appreciates the attentiveness and commitment of Arkansas hospitals, physicians, and healthcare workers in achieving the goals of the Health Care

Quality Improvement Program. Please contact our office for additional resources or for the handling of questions as they arise.

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The Arkansas Medical Society...

As one AMS president's year comes to a close and another AMS president prepares to meet new challenges and reach new goals, the journal takes time to acknowledge and celebrate the successes and accomplishments of the AMS over the last several months. These successes and accomplishments have had a significant impact on Arkansas physicians and their patients.

- Successfully lowered the statute of limitations for lawsuits concerning the treatment of minors, thereby reducing medical liability exposure by 50%.
- Defeated a proposal allowing independent practice and independent prescribing authority by Advance Practice Nurses.
- Sent a message to insurance companies through the passage of the "Any Willing Provider/Patient Protection Act" which conveyed that patients and their doctors should be in control of health care.
- Worked with the Arkansas Congressional Delegation to reinstate separate payments for EKG's and to eliminate reimbursement reductions for new physicians under Medicare.
- Defeated plaintiff attorney's efforts to increase medical liability exposure, which would have resulted in increased malpractice insurance premiums.
- Successfully passed or maintained public health legislation ranging from motorcycle helmets and tobacco prohibition to drunk driving penalties and AIDS legislation.
- Successfully challenged and overturned a 12-hour annual CME requirement by the Arkansas Workers' Compensation Commission.
- Monitored nearly 2,000 bills submitted during the 80th Arkansas General Assembly.
- Maintained the highly effective "Doctor of the Day" volunteer program during the regular and special sessions of the Arkansas General Assembly, and hosted a legislative reception honoring members and spouses of the legislature.
- Co-sponsored the 21st Physician Opportunity Fair at University of Arkansas for Medical Sciences. The fair creates dialogue opportunities between medical residents and students who are interested in learning about practice opportunities in Arkansas.
- Sponsored trips to the AMA meetings for both medical student and resident section delegates.
- Supported two resident section meetings which focused on financial management, and six medical student luncheons which included such topics as financial management, organ donation, state legislation and volunteerism.
- Sponsored a grant request to the AMA by our resident section to establish a community wellness program and implement an educational and training program to include at-risk student training and summer school, drug abuse awareness and prevention, adult education classes, HIV/AIDS prevention, etc., with one of the goals being to create a community-based human resource system.

- Maintained contact with Arkansas Congressional Delegation in Washington D.C. as they considered health care reform, tort reform and countless other federal rules and regulations.
- Represented your interests at a multitude of public hearings on a variety of medical issues including Workers' Compensation, Medicaid Reform and many other legislative issues.
- Coordinated the 119th Annual Session with nationally-known guests speaking on topics such as managed care and domestic violence.
- Monitored and approved CME accreditation for institutions in the state of Arkansas.
- Sponsored practice management workshops for physicians and office staff at locations around the state.
- Helped pass a bill establishing a centralized credentialing service through the Arkansas State Medical Board.
- Coordinated a legal defense fund to fight insurance industry attempts to challenge the Patient Protection Act.
- Took a major role in a successful effort to reverse mandatory Managed Care Organizations for Workers' Compensation.
- Worked to get the Arkansas State Medical Board to clarify that medical assistants could legally give injections.
- Established Health Watch, a coalition of medical provider organizations interested in developing a proactive response to Medicaid block grants.
- Responded to over 2,000 calls from physicians and patients requesting assistance on a variety of issues ranging from medical records to mergers/acquisitions.
- Worked with the Arkansas Department of Human Services to develop changes in the Medicaid Primary Care Physician program.
- Continued to operate the Medical Education Foundation for Arkansas (MEFFA), a private foundation providing grants for speakers and medical items needed for medical education. A portion of each members' dues provides funding for the foundation.
- Assisted over 70 impaired physicians through the Arkansas Physicians' Health Program. Established the Arkansas Medical Foundation to provide a full-time office and medical director for the AMS Physicians' Health Program.
- Continued to operate the Arkansas Access to Health Care Foundation that has through physician and other health care professional volunteers provided medical care to 40,000 low income Arkansans.
- Published the annual membership directory and monthly issues of *The Journal of the Arkansas Medical Society*, including a special October 1995 issue on domestic violence.
- Created new feature sections in *The Journal*. To encourage and make available a forum for our members, the *MAIL* section was added; the *New Member Profile*, one of our most popular additions, was devised to introduce and provide a bit of background and insight into new members; and to expand the statewide information available to our members, *State Health Watch* was created.
- To keep you and your colleagues abreast of issues that effect your profession and practice, the AMS mailed newsletters throughout the year and special legislative reports every week during the 1995 legislative session.
- Was the voice of over 4,000 physicians around the state.

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Pertussis In Arkansas

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Abstract

Although the morbidity and mortality due to pertussis has declined, 109 infants and children were diagnosed and reported to the Arkansas Department of Health with pertussis in 1990-1994. Case rates in Arkansas over this five year period were lower than national case rates (0.9/100,000 vs. 1.77/100,000; $p < 0.0001$) while the case fatality rates were similar. Hospitalization, admissions to the intensive care, and deaths in Arkansas were more commonly demonstrated in children < 1 year of age. Although recent data concerning the safety and efficacy of the acellular vaccines is promising, at this time the primary series should still be given with the whole-cell vaccine until more data becomes available.

Introduction

Pertussis, better known as "whooping cough," is caused by the Gram-negative rod *Bordetella pertussis*. Pertussis can occur at any age, but is most often seen in young children. While hospitalization and mortality rates are highest for children in the first month of life, life-threatening illness can occur in children up to five years of age. Pertussis-like illnesses may be due to other organisms such as *Bordetella parapertussis*, adenoviruses, and *Chlamydia trachomatis*.

Clinical Characteristics

Pertussis can be subdivided into three stages of disease. The catarrhal stage appears after an incubation period of between 6 - 20 days (mean: 7 days) and is usually indistinguishable from a mild upper respiratory infection. Fever is absent or minimal, while rhinorrhea, lacrimation, cough, and conjunctival injection are often present. The symptoms continue for approximately 7 to 10 days. Transmission of disease

to other susceptible individuals may occur in this stage via close contact with respiratory secretions.

The paroxysmal stage typifies the classic symptoms of pertussis. The cough increases in severity and patients often have multiple episodes of short, staccato coughs terminating in a long inspiratory phase with a characteristic "whoop." In infants and young children the whoop is often absent and apnea may be a more prominent complaint. Vomiting may follow these paroxysmal attacks and patients usually appear exhausted after each coughing spell. Cyanosis, bulging eyes, distended neck veins and protrusion of the tongue are often noted on physical examination.

In the convalescent stage, the paroxysmal coughing episodes decrease in severity and frequency over a period of weeks, but in some cases coughing may persist for months. In adults and older children, the only clue to the diagnosis may be the persistent cough. Disease transmission is minimal during this stage and the total duration of illness is usually 6-10 weeks.

Diagnosis

Patients with a chronic cough, post-tussive emesis, cough associated cyanosis or apnea should alert the clinician to the possible diagnosis of pertussis. A peripheral blood examination demonstrating a severe leukocytosis (20,000 - 50,000 cells/mm³) with an absolute lymphocytosis may be demonstrated at the end of the catarrhal and during the paroxysmal stage of the illness. The specific diagnosis requires the recovery or detection of the organism. The organism is most likely to be recovered in the catarrhal or early paroxysmal stage of the illness. The direct immunofluorescent assay (DFA) of nasopharyngeal secretions may provide a specific diagnosis rapidly, but requires highly trained personnel in order to accurately assess the results. A positive result is diagnostic, whereas a negative result does not exclude the diagnosis. Since false-positive and false-negative results occur with the DFA, culture confirmation of all suspected cases should be attempted. The culture of the nasopharynx using Dacron or calcium alginate swabs, instead of the use

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of cough plates, is currently recommended. For the best results, these secretions should be placed on a specialized media (e.g., Bordet-Gengou, Regan-Lowe) at the bedside. The organism is slow growing and may not be recovered in patients in the latter stages of disease. Patients who have been administered antimicrobials agents for which *B. pertussis* is susceptible (e.g., erythromycin) prior to having a culture will have a decreased rate of recovery of the organism.

Treatment

It is important for the clinician to understand that only **treatment in catarrhal stage alters the course of the illness** and that treatment of individuals in the paroxysmal stage or later only serves to prevent the spread of disease to other susceptible hosts. Erythromycin (40-50 mg/kg/day divided four times daily for 14 days) is the drug of choice for the treatment of pertussis. Some experts prefer using the estolate preparation because of better respiratory secretion penetration. Once a diagnosis of pertussis is established in a family, all household contacts should receive a similar course of erythromycin irrespective of their vaccination status. If the patients cannot take erythromycin, trimethoprim-sulfamethoxazole should be used as an alternative. The use of chemoprophylaxis to the household is important because pertussis immunity is not absolute and the prompt use of erythromycin in the household will limit the development of secondary cases. In addition to erythromycin, close contacts less than 7 years of age who have not received their fourth dose of vaccine should have their immunization schedule initiated or continued. Children who have received their third dose of pertussis vaccine six months or more before exposure should be given a fourth dose at this time. If the exposed children have received four doses of vaccine, they should also receive a booster dose unless their last dose was within 3 years or they are more than six years of age.

Hospitalization of children less than six months of age is appropriate for management of paroxysms, cyanosis, apnea, or feeding difficulties, especially since the morbidity and mortality associated with this disease is highest in this age group. While hospitalized, patients should be monitored closely in an area which is easily accessible to medical personnel in case the patient develops complications. Patients who are hospitalized should be placed in respiratory isolation until they have received five days of erythromycin therapy to render them non-infectious. If hospitalized patients do not receive the appropriate antimicrobial therapy, respiratory isolation is recommended for 3 weeks.

TABLE 1: Reported pertussis cases in Arkansas by county 1991-1994

<u>No. cases</u>	<u>County</u>
19	Pulaski
12	Washington*
5	Benton
4	Faulkner, Pope
3	Garland, Jefferson, Lafayette, Sebastian, Stone
2	Chicot, Crawford, Lonoke, Monroe, Phillips*
1	Columbia, Conway, Crittendon, Dallas, Fulton, Grant, Independence, Jackson, Logan, Mississippi, Perry, Pike, Prairie, Saline, Union

**Denotes counties where deaths occurred*

Pertussis in Arkansas

From 1990 through 1994, 109 cases of pertussis were reported to the Arkansas Department of Health. As with all reportable diseases, only a small proportion of actual cases are ever diagnosed and reported. Based upon these numbers however, the average annual incidence of pertussis in Arkansas during this time period was 0.91 cases/100,000 population (range: 0.71 - 1.35 cases/100,000). Reporting data from individual counties in Arkansas over a four year period (1991-1994) demonstrates that cases occurred over the entire State (Table 1). The average annual incidence reported for the United States was much greater during this similar period (1.77 cases/100,000; range: 1.08 - 2.55 cases/100,000; $p < 0.0001$) as compared to Arkansas.¹ To put this in perspective, the average annual incidence of pertussis in the United States prior to the development of the whole-cell pertussis vaccine was 150 cases/100,000 population. The incidence of disease declined dramatically after the introduction and wide spread use of the whole-cell vaccine to a low in 1976 of approximately 0.47 cases/100,000. Due to questions concerning the safety of the whole-cell vaccine and other unknown reasons, the annual incidence of disease has trended upward since 1976, peaking in 1993 at 2.55/100,000.

In an attempt to assess the severity of illness, the data from the 67 admissions to Arkansas Children's Hospital between 1990-1994 was reviewed (Table 2). Eighty-two percent of the children were less than one year of age, and pertussis was identified as the primary diagnosis in 58 admissions (86.6%). In the four admissions of children over 5 years old, only one had pertussis listed as the primary diagnosis. Fourteen cases (21 %) required admission to the Pediatric Intensive Care Unit (PICU), all were less than one year of age and they required an average length of stay in the intensive care unit of 6 days (range: 1 - 33 days). Both deaths reported to the Arkansas Department of Health from 1990-1994 occurred in the PICU at Arkansas

Children's Hospital from secondary infections. Although difficult to interpret, there were 56 deaths specified from 34,325 cases of pertussis from 1983-1992 in the United States for a 10 year case fatality rate of 0.16%.¹ This is not statistically different from the 5 year case fatality rate in Arkansas of 1.8% (2/109;p = 0.076).

Immunization

To be considered completely immunized, a child must have received a total of 5 doses of pertussis vaccine. Pertussis vaccine, given in the form of a DTP (diphtheria, tetanus, whole-cell pertussis), is recommended at two, four, and six months of age. A fourth dose should be given between 12-18 months of age, while the fifth dose is between four and six years of age. DTaP (diphtheria, tetanus, acellular pertussis vaccine) may be used in place of DTP for either the fourth or fifth dose in patients less than seven years of age. The acellular vaccine is currently not recommended for use in young infants for their primary series.²

The National Immunization Survey (NIS) provides state and national estimates of vaccination rates among children in the United States from 19 to 35 months of age. Based on the NIS for children who were born May 1991-May 1993, the estimated national vaccination coverage was 75% for receipt of at least four doses of DTP, three doses of poliovirus vaccine and one dose of measles-mumps-rubella. State specific data revealed that Arkansas estimated a 71% vaccination coverage for these three vaccines for children 19-35 months of age.³ If each vaccine was evaluated individually, the national vaccination coverage was > 90% for three or more doses of DTP, while state specific data was not presented.

Adverse Immunization Reactions

The most common adverse events after a whole-cell pertussis immunization is the development of redness, edema, induration, and tenderness at the injection site. Fretfulness, anorexia, vomiting, crying, and a mild to moderate amount of fever often occur within several hours of the immunization. These adverse events will subside spontaneously without sequelae within 48 hours.

High fever, persistent or unusual crying may occur as frequently as one per 100 DTP injections. More serious adverse events such as anaphylaxis has been noted to occur in approximately two per 100,000 DTP injections, while seizures occurring within 48 hours after administration of the vaccine have

been described to occur in 1 per 1,750 doses administered.⁴ Most seizures occurring after the administration of the DTP vaccine are brief, self-limited, generalized, and occur in association with fever. These seizures have not been noted to result in the subsequent development of a chronic seizure disorder or other neurologic sequelae. A collapse or shock like state has been described to occur anywhere from 1 per 1,750 to 3.5 to 291 per 100,000 immunizations. Neurologic follow-up of such infants and children have also demonstrated no serious long term sequelae from such an experience.⁵

The most controversial and publicized adverse reaction attributed to whole-cell pertussis immunization is the development of acute, serious neurological illness or encephalopathy. The National Childhood Encephalopathy Study was a case controlled study carried out in Great Britain from 1976 to 1979 to address this issue in 1,182 children (2-36 months of age), who were hospitalized. Based upon this study, it was estimated that the risk of acute, serious neurological illness (excluding infantile spasms) within seven days of immunization in neurologically healthy children was 1 in 140,000 immunizations. Further neurological assessment of these children appeared to indicate that permanent neurologic sequelae could occur in 1 in 330,000 vaccinations.⁶ Review of these data however, indicated that since the study population was small, valid information regarding whether DTP vaccine could cause permanent brain damage could not be provided.⁷ Furthermore, serious neurological disease from DTP vaccination resulting in brain damage has been impossible to determine on the basis of clinical or laboratory findings. Because of this the Canadian National Advisory Committee on Immunization, the British Pediatric Association, and the American Academy of Pediatrics have stated that the pertussis vaccine has not been proven to be a cause of brain damage.⁸ Although the data do not prove that pertussis vaccine can never cause brain damage, if it does, such occurrences are exceedingly rare. This issue will remain controversial until this occurrence can be reassessed when the acellular vaccine is used for children less than 15 months of age on a routine basis.

TABLE 2: Pertussis admissions at Arkansas Children's Hospital

Year	0-6 months	7-12 months	1-4 years	> 4 years
1990	12	1	4	1
1991	8	3	0	0
1992	3	1	3	0
1993	3	2	0	1
1994	19	3	1	2
TOTAL	45 (67%)	10 (15%)	8 (12%)	4 (6%)

The Acellular Vaccine

Due to advancements in molecular biology, a new generation of highly purified acellular vaccines have been developed as a result of questions regarding the safety of the whole-cell vaccine. Unlike the whole-cell vaccines, the acellular vaccines are made only from the biologically active components of *B. pertussis*. Acellular vaccines are currently approved in the United States for the administration of the fourth or fifth dose (ACELIMUNE, Lederle laboratories; Tripedia, Connaught Laboratories) in the vaccination series for children younger than seven years of age.² The limitation on the use of the acellular vaccine because of the lack of data in younger infants has been frustrating to physicians and the general public alike. Recent studies in infants from 2-6 months of age however, have shown that the acellular vaccines (including those currently licensed in the United States) can stimulate immune responses that exceed those of the currently licensed whole-cell vaccines with respect to measured pertussis antibody levels.⁹ Studies concerning the efficacy of these vaccines compared to the conventional whole-cell vaccines are underway and these data need to be collected and reviewed prior to using the acellular vaccines in the primary series. The reason for this is that although the acellular vaccines produce higher levels of pertussis antibody, the serologic correlates of pertussis immunity are not defined.

Equally as encouraging are the preliminary data concerning the adverse effects of the acellular vaccines in infants 2-6 months of age. Parents of infants receiving the acellular vaccines have reported decreased local reactions, fever, irritability, drowsiness, anorexia, vomiting, and unusual crying as compared to those who received the whole-cell vaccines.^{10, 11} It has also been demonstrated that although reactions after a second or third vaccination with either the acellular or whole-cell vaccine are more likely to occur in infants who had the same reaction after a preceding vaccination, the risk of repeated reactions tends to be lower with the acellular vaccines.¹² It is important to remember however, that these studies have been too small to adequately evaluate the more serious events attributed to the whole-cell vaccines discussed above.

Acknowledgements

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HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY (HOCM)

Hypertrophic cardiomyopathy (HCM) is characterized by an inappropriate ventricular hypertrophy usually involving the interventricular septum.^{1,2} The non dilated ventricle displays hyperdynamic systolic and abnormal diastolic function. Twenty-five percent of patients have obstruction of the left ventricular outflow tract or hypertrophic obstructive cardiomyopathy (HOCM).³ We recently cared for a patient with HOCM who had several characteristic features of this syndrome.

Patient Presentation

The patient is a 30-year-old asymptomatic female who had a systolic murmur heard on a routine health maintenance physical examination. She exercised on a regular basis. She had no significant past medical history and was on no medications. Several family members reported histories of murmur, however, there was no history of arrhythmias or sudden death.

The point of maximal impulse was not displaced. A grade 2/6 holosystolic murmur, loudest at the left lower sternal border and radiating to both carotids was present. The murmur was slightly accentuated with rising from a squatting to a standing position and with a Valsalva maneuver. A prominent S₄ was audible at the left lower sternal border.

The electrocardiogram revealed normal sinus rhythm, biatrial abnormality and left ventricular hypertrophy with abnormal repolarization. An echocardiogram (Figure 1) showed asymmetrical septal hypertrophy of the left ventricle, systolic anterior motion of the mitral valve, left atrial dilation, mild

mitral regurgitation by color flow imaging and a maximum systolic left ventricular outflow tract velocity of 4.0 m/sec corresponding to a left ventricular outflow tract gradient of 64 mmHg.

A cardiac catheterization was performed to further evaluate the outflow tract, aortic valve, and hemodynamics. Pressures were (in mmHg): pulmonary capillary wedge pressure 18, pulmonary artery 48/22, aorta 100/60, left ventricle pressure 205/15. There was a 105 mmHg gradient in the left ventricular outflow tract (Figure 2). The pressure tracing showed the Brockenbrough-Braunwald-Morrow sign (Figure 3). Treatment with oral verapamil was initiated.

Pathophysiology

Familial hypertrophic cardiomyopathy is an inherited autosomal dominant disease with variable penetrance.⁴ Mutations on four separate chromosomes have been identified. These codes for abnormal gene products include beta myosin heavy chain, cardiac troponin T, and alpha tropomyosin. These mutations result in an abnormal sarcomere.² The estimated prevalence of HOCM is 1-10/10,000. The precise prevalence will not be known until the genetic basis of the disease is further elucidated.

The defining feature of HOCM is dynamic left ventricular outflow tract obstruction resulting from hypertrophy of the basal septum and anterior displacement of the papillary muscles and mitral valve. Microscopically, the septum shows marked cellular disarray, myofibril disorganization and variable degrees of fibrosis.^{1,3} Turbulence causes the anterior mitral valve leaflet to approach the intraventricular septum in systole. The contact of the anterior leaflet of the mitral valve with the interventricular septum narrows the left ventricular outflow tract and causes the systolic pressure gradient.² The gradient is directly proportional

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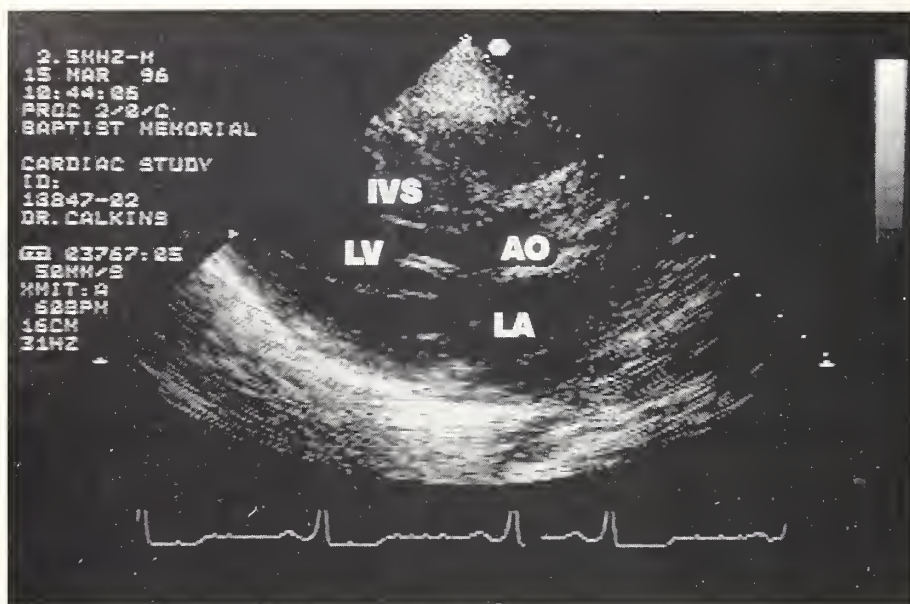


Figure 1: Parasternal long axis echocardiogram demonstrating asymmetrical septal hypertrophy of the intraventricular septum, systolic anterior motion of the anterior mitral valve and marked left atrial dilatation.

Abbreviations: AO=Aorta, IVS=Interventricular septum, LA = Left atrium, LV = Left ventricle

to the duration of contact of these structures.³ Another prominent feature of HOCM is diastolic left ventricular dysfunction. Active myocardial relaxation is delayed due to impaired calcium handling and slow deactivation of actin myosin cross bridging.¹ Increased muscle mass and fibrosis make the myocardium less distensible.^{1,2} Additional factors include a decreased gradient between the left atrium and left ventricle, prolonged ejection which occurs at the expense of diastole³ and myocardial ischemia.²

Mitral regurgitation is due to systolic anterior motion of the mitral valve, abnormal coaptation of the mitral valve leaflets,⁵ and increased left ventricular pressure. Mitral regurgitation leads to left atrial dilatation and increases the risk for atrial fibrillation. In the setting of left ventricular diastolic dysfunction, left atrial contraction assumes a large role in augmenting left ventricular filling. Loss of atrial contribution seen with atrial fibrillation leads to sudden clinical deterioration.

Left ventricular systolic function is usually normal to supranormal.² However, late in the disease, systolic dysfunction occurs secondary to extensive myocardial fibrosis, ischemia or infarction due to small vessel disease, or as a result of concomitant atherosclerotic coronary artery disease.²

Clinical Manifestations

Most patients with HOCM are asymptomatic or only mildly symptomatic adolescents or young adults. The diagnosis of HOCM is often made after a murmur is detected on physical examination as in our patient. In symptomatic patients, the degree of symptoms correlates poorly with the degree of left ventricular outflow

tract obstruction.² The most common presenting symptom is dyspnea, occurring in 90% of symptomatic patients.¹ Dyspnea occurs as a result of diastolic dysfunction and to a lesser degree, mitral regurgitation. Angina pectoris occurs in approximately 75% of symptomatic patients as a result of small-vessel coronary disease, decreased coronary perfusion resulting from elevated left ventricular diastolic pressures, compression of septal perforators during hyperdynamic contraction, and less commonly to atherosclerotic coronary disease. Other common symptoms include fatigue and syncope. Less commonly patients experience palpitations, paroxysmal nocturnal dyspnea and dizziness. Many of these symptoms are exacerbated by exertion.¹

The first clinical manifestation is occasionally sudden death. This

has been reported to occur at a rate of 1-3% per year in adults.^{6,7} Risk factors for sudden death include spontaneous non sustained ventricular tachycardia on ambulatory ECG monitoring and a family history of HOCM and sudden cardiac death. The magnitude of the left ventricular outflow tract obstruction and the elevation of the left ventricular end diastolic pressure have been found to be adverse prognostic determinants in some studies but not in others.³

The most prominent feature of the physical examination is the systolic murmur of HOCM. This is a typically harsh, crescendo-decrescendo systolic murmur that begins after the first heart sound and is best heard between the apex and the left sternal border. It radiates to the lower sternal border, the axilla, and the base of the heart.¹ The murmur is variable in intensity and duration reflecting the dynamic outflow tract obstruction. Its intensity and duration is increased by measures that decrease preload, increase contractility or decrease afterload such as: Valsalva maneuver, standing, amyl nitrate inhalation, nitroglycerin administration, and isoproterenol infusion. The murmur is decreased by measures that increase preload, decrease contractility, or increase afterload such as: squatting, isometric hand grip, and beta adrenoceptor blockade. Other findings include a variably displaced and forceful left ventricular impulse,² a triple apical impulse which occurs as a result of isometric contraction in a nearly empty ventricle¹ and a prominent often palpable fourth heart sound.² A biphasic carotid pulsation resulting from mid systolic left ventricular outflow tract obstruction is often appreciated.¹

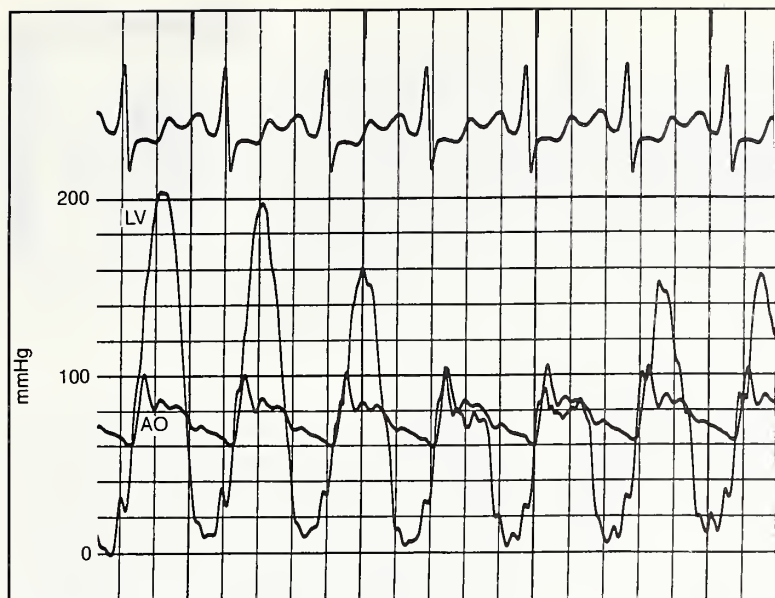


Figure 2: Hemodynamic tracing obtained at cardiac catheterization. Pullback of the left ventricular catheter to the aorta demonstrates an initial peak gradient of 105 mm/Hg. The "spike-and-dome" pattern characteristic of hypertrophic obstructive cardiomyopathy is also demonstrated in the aortic tracing.

Abbreviations: AO = aortic pressure, LV = LV pressure, 200 scale (each line = 20 mm/Hg)

Diagnostic Studies

The ECG in HOCM may be normal, however, LVH and associated repolarization abnormalities occur frequently. Rarely, septal Q waves may indicate septal hypertrophy and/or a myocardial infarction. A variant of HOCM, apical hypertrophy, is associated with giant negative T waves.² The chest x-ray may also be normal, but it often shows left ventricular, left atrial, or right atrial enlargement with a normal aortic root.²

The primary echocardiographic features of HOCM are asymmetrical septal hypertrophy and systolic anterior motion of the anterior leaflet of the mitral valve (Figure 1).⁸ Other abnormalities include a decrease in left ventricular cavity size, an unusual reflectivity pattern from the area of hypertrophied myocardium, left atrial enlargement, and abnormal systolic motion of the aortic valve.⁸ Additionally, the left ventricular outflow tract gradient can be quantitated by using spectral Doppler. Mitral regurgitation can be demonstrated with color flow imaging.

The most striking feature of cardiac catheterization in patients with HOCM is the hemodynamic data. Patients may have no resting gradient and may require measures such as isoproterenol infusion, amyl nitrate inhalation, nitroglycerin administration or atrial pacing to provoke the gradient.^{1,9} The aortic wave form has a characteristic spike-and-dome pattern. An initial rapid rise in aortic pressures causes the spike in early systole and is followed by a decrease in pressure and a prolonged dome reflecting the mid and late systolic left ventricular outflow tract obstruction and prolonged

systolic emptying of the left ventricle.⁹ The dynamic obstruction in HOCM is best illustrated by the Brockenbrough-Braunwald-Morrow sign (Figure 3). This occurs as a result of post extra systolic potentiation of left ventricular contractility that produces an increase in the left ventricular outflow tract gradient and a narrowing of the aortic pulse pressure.⁹ Coronary angiography may demonstrate systolic compression of the left anterior descending artery by the hypertrophied septum producing a "sawfish" appearance of the arteries.⁹ Septal hypertrophy and systolic anterior motion of the mitral valve can be demonstrated by ventriculography.

Electrophysiologic testing has been advocated in selected patients with HOCM who are at high risk for arrhythmic events. In patients with previous cardiac arrests, syncope, and asymptomatic ventricular tachycardia on ambulatory electrocardiographic readings, electrophysiologic abnormalities occur in 81%.¹⁰ These include sustained and non sustained ventricular tachycardia, sinus node dysfunction, supraventricular tachycardia, and abnormal His-Purkinje and AV nodal conduction.¹⁰

Treatment

Health maintenance. Since strenuous physical activity, especially isometric exercise, may predispose patients to lethal ventricular arrhythmia and exacerbate provokable left ventricular outflow tract obstruction, even asymptomatic patients should avoid participation in strenuous or competitive activities.³ Prophylactic antibiotics for the prevention of subacute bacterial endocarditis is appropriate.³ Echocardiographic screening of the patients first degree relatives is useful in identifying family members who need prospective follow up.³

Pharmacological management. Medical management of the asymptomatic or mildly symptomatic patient should be initiated with a beta blocker or verapamil. Beta blockers have shown to decrease catecholamine-related provocation of left ventricular outflow tract obstruction and are effective in preventing exercise-induced increases in dynamic outflow tract obstruction.³ However, most studies have not consistently shown a significant effect of beta blockade on left ventricular diastolic function.^{1,3}

Verapamil decreases the left ventricular outflow tract obstruction by decreasing left ventricular contractility and by increasing left ventricular volume to improve diastolic filling.^{1,3} Verapamil may paradoxically increase the left ventricular outflow tract obstruction in patients in whom systemic peripheral vasodilatation predominates.^{2,3} Nifedipine has not been shown to produce consistent decreases in left ventricular outflow tract obstruction. Additionally, marked reduction



Figure 3: Hemodynamic tracing obtained in cardiac catheterization. The Brockenbrough-Braunwald-Morrow sign is demonstrated following two consecutive premature ventricular contractions with a post extra systolic potentiation of contractility resulting in a increase in the left ventricular outflow tract gradient and a decrease in the aortic pulse pressure.

Abbreviations: AO = Aortic pressure, LV = LV pressure, PVC = Premature ventricular contraction.

in systemic vascular resistance may also exacerbate left ventricular outflow tract obstruction.^{1, 2, 3}

Disopyramide is a potent negative inotropic. It causes a significant reduction in the left ventricular outflow tract gradient and a shortening in the left ventricular ejection time.³ It may be especially beneficial in patients with ventricular arrhythmias that are responsive to type 1A antiarrhythmics and in those with atrial fibrillation.³ Digoxin and diuretics are contraindicated in HOCM since these agents may worsen left ventricular outflow tract obstruction.^{1, 3} Both agents may be useful if systolic dysfunction occurs. Diuretics may be used cautiously in combination with a beta blocker or calcium channel antagonist to reduce symptoms of pulmonary congestion.

Mechanical and surgical treatment. Dual chamber pacing has been demonstrated to decrease the subaortic pressure gradient in HOCM. The exact mechanism is uncertain but may be related to paradoxical septal motion, late activation of the base of the septum, or decreased left ventricular contractility.² Atrial-ventricular delay must be optimized in order to achieve complete ventricular capture and prevent physiologic depolarization of the ventricles.²

Septal myectomy involves resection of the hypertrophied ventricular septum through a transaortic approach.¹ Indications include: intractable symptoms despite maximal medical therapy, basal left ventricular outflow tract gradient than 50 mm/Hg³ and the oc-

currence of atrial fibrillation.² Septal myectomy abolishes or significantly reduces the subaortic pressure gradient in 95% of patients and reduces the left ventricular end diastolic pressure in 66% of patients with HOCM.³ There have been no direct comparisons of dual chamber pacing and septal myectomy but both modalities appear to be superior to medical therapy.² However, pacing does not appear to completely eliminate the obstruction as effectively as myectomy.

Conclusion

HOCM is an inherited condition with variable clinical manifestations. Patients are at increased risk for the development of congestive heart failure, syncope, and sudden death. A high index of suspicion is necessary in evaluating asymptomatic patients with systolic murmurs. Referral for echo-cardiographic evaluation is recommended.

Acknowledgment:

Thanks to Bobbie Long, RCDS for the echocardiogram and Tracy Baker for assistance in preparation of the manuscript.

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State Health Watch

Information provided by the Arkansas Department of Health

Meningococcal Disease in Arkansas in 1995

Invasive disease caused by *Neisseria meningitidis* is still a significant public health threat. Disease may occur as meningitis or as meningococcemia, with differing symptoms and mortality rates. Mortality from meningitis is still 10-15%, while the death rate from meningococcemia may be as high as 30%.

Physicians and health facilities in Arkansas reported 39 cases of meningococcal disease to the Arkansas Department of Health (ADH) during 1995, and a 5-year total of 155 cases during 1991-1995. The average incidence rate for that period was 1.2 per 100,000 persons. From 1990 to 1994, the mean annual number of cases reported to the CDC was 2,447, for a national incidence rate of 1 per 100,000 persons.

The disease is endemic in the United States, with clusters and outbreaks of disease as well as sporadic cases. Groups B and C meningococci cause most cases of disease in the U.S., while Group A organisms are more likely to cause epidemics of meningococcal disease in other countries. Of 32 meningococcal isolates available for serogrouping in 1995 by the Arkansas State Health Department, 13 were Group B, 11 were Group C, and 7 were Group Y. In the U.S. in recent years, Group C bacteria have been implicated as the cause of outbreaks which primarily affect school-aged children.

Figure 1 shows the age distribution for Arkansas cases reported during 1991-1995, inclusive. (Note that the 0-9 yr. group is broken into 0-4 and 5-9 year groups in contrast to cases 10 years of age and over.) Cases reported for 1994 were included in the 5-year average, but are also displayed separately, to note the marked increase in cases in the 10-19 year group. Increases in this age group have been noted in the US in recent years, and are associated with increased numbers of cases caused by group C meningococci.

Overall, meningococcal disease is more frequent in younger children, and the severity of disease, including mortality, is also greater. In 1995, 23% (9) of 39 cases were less than one year of age, and 59% (23) were less than 10 years of age.

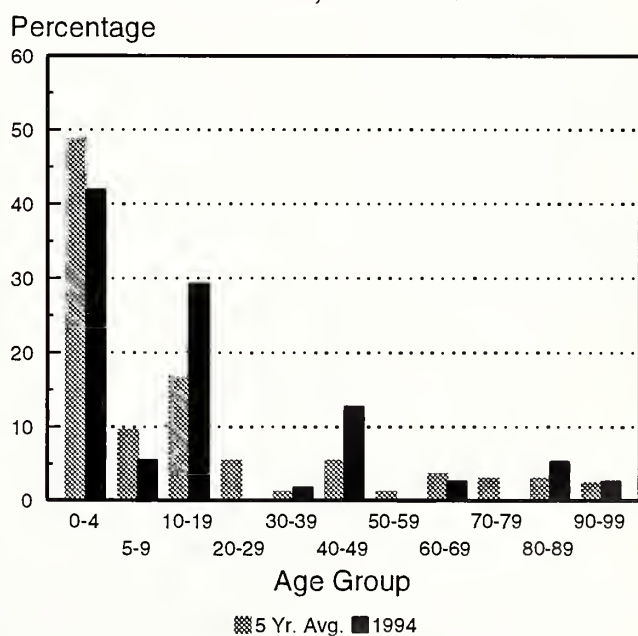
Meningococcal disease is more common in the late winter and spring in the United States, and incidence data for Arkansas bear this out. During 1995, 29 (74%) occurred during the winter and spring months. Figure 2 depicts the reported number of cases for each

quarter-year from 1993 to 1996, and shows clearly the reporting trends during the period.

No vaccines are currently recommended for general administration for prevention of meningococcal disease. The vaccine currently available in this country is quadrivalent, containing antigens for Groups A, C, Y, and W-135. Meningococcal vaccine is routinely given to military recruits, and is used to reduce the risk of disease in travelers to countries which are experiencing outbreaks. The vaccine has been used recently in controlling outbreaks caused by Group C meningococci, but the C component is poorly immunogenic in children under two years of age. The vaccine should be given to asplenic persons over two years of age, who are especially susceptible to serious meningococcal infections.

For epidemiologic information and to assist in making decisions regarding the possible use of vaccine in controlling outbreaks, grouping of isolates is

Figure 1. Meningococcal Disease Age Distribution, by percentage Arkansas, 1991-1995



performed at the ADH Microbiology Laboratory.

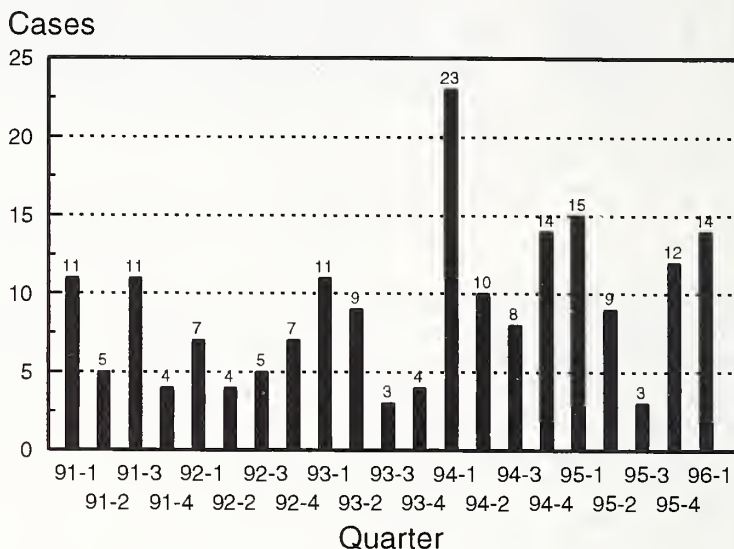
From 5-10% of persons may carry meningococci in the nasopharynx at any given time. Susceptibility to disease is generally low, and decreases with age. However, the risk of disease is significantly elevated in household and other close contacts of cases. Both carriage and infection rates are increased in persons exposed to cigarette smoke.

Household and other intimate contacts (close friends and persons with whom the case may have shared eating utensils) should receive prophylactic antibiotics to prevent disease and eliminate carriage of the bacteria. All younger children at daycare centers are at higher risk of exposure and disease, and should receive prophylaxis. Rifampin and ceftriaxone may be used for prophylaxis in either children or adults, and ciprofloxacin may be used in adults.

References:

Control of Communicable Diseases Manual, Abraham S. Benenson, Ed., 1995. American Public Health Association.

**Figure 2. Meningococcal Disease
By Quarter of Occurrence
Arkansas, 1991-1996**



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Influenza Update

Arkansas: As of mid-April, the ADH is reporting no significant influenza activity.

United States: Although active surveillance indicates that influenza activity has declined to very low levels in most parts of the country, three states (New York, Wisconsin and Missouri) reported outbreak activity during mid-March.

The Missouri Department of Health reported an outbreak on a university campus with a student population of approximately 5000. From March 7-15, 1996, about 150 students were seen each day at the university student health center for influenza-like illness. The attack rate for this period was approximately 21%. By March 15, the outbreak had subsided and further patient visits to the student health center were due to

possible influenza-related complications such as bronchitis and sinusitis, and for routine follow-up. Five positive cultures were obtained for influenza type A(H3N2), and two were positive for influenza type B. Both influenza type A and B were isolated from one of the patients.

Sixty-four percent (2,146) of the influenza type A isolates reported to the Centers for Disease Control have been subtyped. Of these subtyped isolates, 59% (1,427) are A(H1N1) and 41% (989) are A(H3N2).

Between early October and late January 1996, influenza type A accounted for 96-100% of the isolates reported. In February, the number of influenza type B isolates reported began to increase and during March 1996, influenza type B accounted for 50-72% of all isolates reported each week.

Reported Cases of Selected Reportable Diseases in Arkansas Profile for February 1996

The three-month delay in the disease profile for a given month is designed to minimize any changes that may occur due to the effects of late reporting. The numbers in the table below reflect the actual disease onset date, if known, rather than the date the disease was reported.

Selected Reportable Diseases	Total Reported Cases Feb. 1996	Total Reported Cases YTD 1996	Total Reported Cases YTD 1995	Total Reported Cases YTD 1994	Total Reported Cases 1995	Total Reported Cases 1994
Campylobacteriosis	6	19	15	14	152	187
Giardiasis	9	19	22	18	131	126
Shigellosis	4	11	24	30	175	193
Salmonellosis	14	33	21	31	332	534
Hepatitis A	47	108	36	17	663	253
Hepatitis B	2	9	13	10	92	60
HIB	0	0	0	1	6	5
Meningococcal Infections	2	8	11	15	39	55
Viral Meningitis	1	4	0	5	31	62
Lyme Disease	1	1	2	2	9	15
Rocky Mountain Spotted Fever	0	0	0	1	30	18
Tularemia	0	0	1	1	22	23
Measles	0	0	2	0	2	5
Mumps	0	0	1	2	5	7
Rubella	0	0	0	0	0	0
Gonorrhea	388	834	564	1179	5437	7078
Syphilis	78	143	157	182	1017	1096
Legionellosis	0	0	2	4	5	16
Pertussis	1	2	6	5	60	33
Tuberculosis	13	16	26	15	271	264

Arkansas HIV/AIDS Report

1983-1996

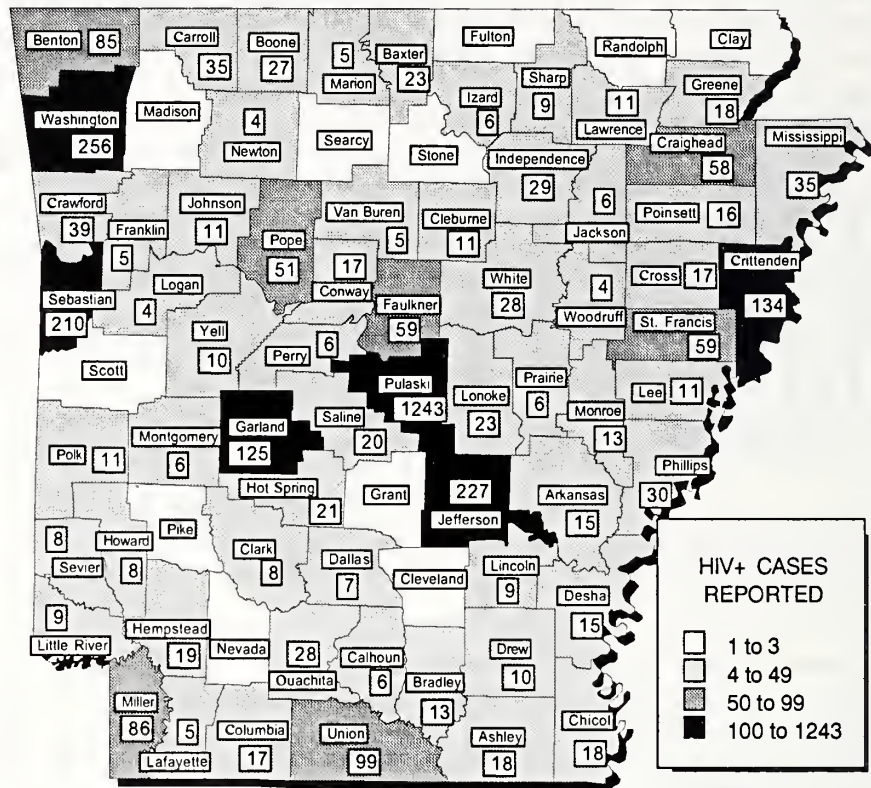
HIV In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.



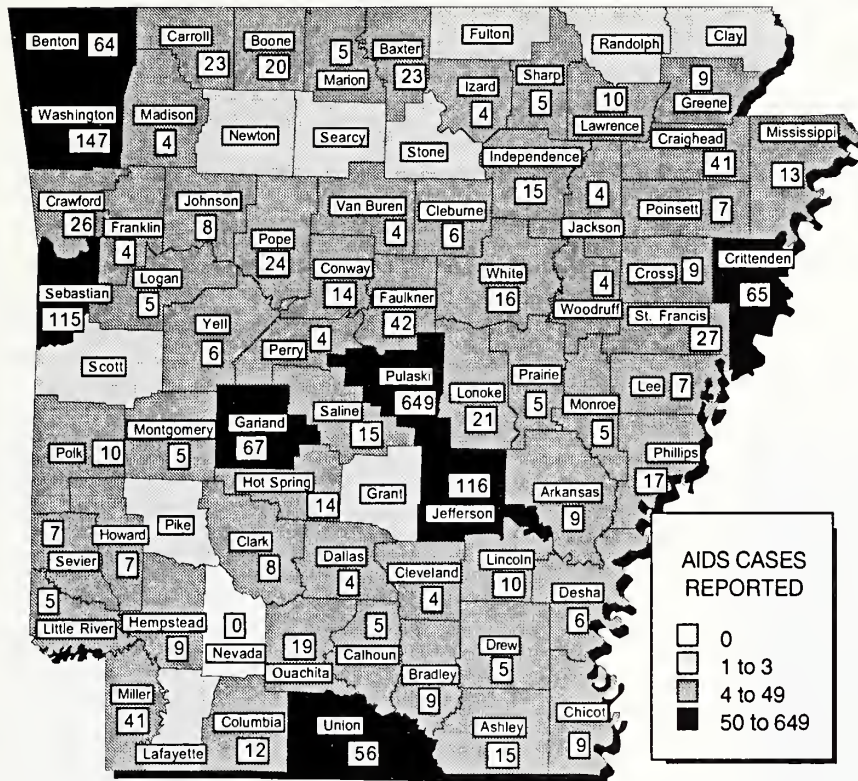
County of residence at the time of test for the 3,500 Arkansans reported to be HIV+. (3/12/96)

HIV		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	100	215	248	413	400	392	352	367	337	77	2,901	83
	Female	8	26	37	68	85	81	94	90	92	18	599	17
AGE	<5	1	1	2	8	13	6	3	7	2	0	43	1
	5-12	0	1	1	5	1	2	1	0	1	0	12	0
	13-19	0	7	8	14	19	25	11	22	12	7	125	4
	20-29	33	110	123	183	149	156	175	145	125	30	1,229	35
	30-39	44	86	104	196	208	179	168	171	182	38	1,376	39
	40-49	22	25	35	56	70	67	65	77	70	10	497	14
	>49	8	6	11	17	22	38	23	35	37	10	207	6
RACE	White	87	170	174	328	298	293	278	259	260	55	2,202	63
	Black	21	69	108	151	184	173	163	184	159	34	1,246	36
	Hispanic	0	1	2	1	3	4	1	7	3	2	25	1
	Other/Unknown	0	1	1	1	0	3	4	7	7	4	27	1
RISK	Male/Male Sex	64	137	140	243	246	260	241	229	153	25	1,738	50
	Injection Drug User (IDU)	13	30	48	74	96	75	65	71	48	5	525	15
	Male/Male Sex & IDU	19	23	24	32	30	34	26	23	24	7	242	7
	Hetero. (Known Risk)	5	25	26	59	64	68	100	90	52	3	492	14
	Transfusion	5	5	4	6	8	10	0	2	2	0	42	1
	Perinatal	1	1	2	8	13	8	4	7	0	0	44	1
	Hemophiliac	0	0	6	18	5	6	2	3	5	0	45	1
	Undetermined	1	20	35	41	23	12	8	32	145	55	372	11
HIV CASES BY YEAR		108	241	285	481	485	473	446	457	429	95	3,500	100

Arkansas Department of Health HIV/AIDS Surveillance Program

Arkansas HIV/AIDS Report

1983-1996



Of the 3,500 Arkansans reported to be HIV+, 1,965 have been diagnosed with AIDS. (3/12/96)

AIDS In Arkansas

Reporting Requirements

HIV and AIDS case reporting by name and address is required by Act 967 of 1991 and the rules and regulations of the Arkansas Board of Health. Reporting is required at the time a person tests positive and again when they become symptomatic with AIDS. Those required to report include: physicians, nurses, infection control practitioners/infection control committees, laboratory directors, medical directors of nursing homes and home health agencies, clinic administrators, program directors of state agencies and/or persons as may be required by the Board of Health.

Questions regarding reporting forms and requirements may be directed to Jan Bunch, HIV/AIDS Surveillance Administrator, at (501) 661-2387.

NOTE: County of residence may change from date of HIV test to date of AIDS diagnosis.

AIDS		83-87	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total	%
SEX	Male	85	77	70	170	176	250	335	253	238	57	1,711	87
	Female	5	6	10	20	25	35	64	42	36	11	254	13
AGE	<5	0	1	1	6	6	3	2	1	2	0	22	1
	5-12	0	1	0	1	1	0	1	0	2	0	6	0
	13-19	0	0	0	4	3	2	4	3	1	0	17	1
	20-29	31	27	24	55	57	81	110	67	58	13	523	27
	30-39	39	36	41	78	80	128	178	133	124	36	873	44
	40-49	15	10	7	35	41	52	77	61	52	12	362	18
	>49	5	8	7	11	13	19	27	30	35	7	162	8
RACE	White	74	61	58	141	134	206	274	190	174	41	1,353	69
	Black	16	20	21	47	66	75	121	102	97	25	590	30
	Hispanic	0	1	0	0	1	3	3	2	3	2	15	1
	Other/Unknown	0	1	1	2	0	1	1	1	0	0	7	0
RISK	Male/Male Sex	55	59	50	122	120	183	238	165	132	25	1,149	58
	Injection Drug User (IDU)	12	4	11	18	29	45	70	46	45	4	284	14
	Male/Male Sex & IDU	16	6	6	18	17	21	27	23	20	4	158	8
	Hetero. (Known Risk)	5	3	7	11	12	24	52	41	32	3	190	10
	Transfusion	2	7	3	7	11	3	2	4	3	1	43	2
	Perinatal	0	1	1	6	6	3	3	1	3	0	24	1
	Hemophiliac	0	1	1	5	5	4	5	6	7	1	35	2
	Undetermined	0	2	1	3	1	2	2	9	32	30	82	4
AIDS CASES BY YEAR		90	83	80	190	201	285	399	295	274	68	1,965	100

Arkansas Department of Health HIV/AIDS Surveillance Program

New Members

DUMAS

Munshi, Medha N., Internal Medicine. Medical Education, Bawda Medical College, Baroda, India, 1985. Internship/Residency, Ball Memorial Hospital, 1990/1992. Fellowship, UAMS, 1995. Board certified.

LAKE VILLAGE

Kinney, Joyce, Internal Medicine. Medical Education, UAMS, 1981. Internship, St. Vincent Infirmary, Little Rock, 1982. Residency, UAMS, 1986. Board certified.

LITTLE ROCK

Edrington, David C., Emergency Medicine. Medical Education, UAMS, 1987. Internship/Residency, UAMS, 1988/1990. Board certified.

Peek, Richard D., Orthopedic Surgery. Medical Education, UAMS, 1981. Internship, University of Kentucky, 1982. Residency, Orlando Regional, 1983 and UAMS, 1986. Board certified.

Waldron, James, Alex, Jr., Pathology. Medical Education, Vanderbilt University School of Medicine, Nashville, TN, 1974. Internship/Residency, Vanderbilt Hospital, 1975/1977. Board certified.

NORTH LITTLE ROCK

Ibsen, Michelle Janette, General Practice. Medical Education, UAMS, 1987. Internship, UAMS, 1988.

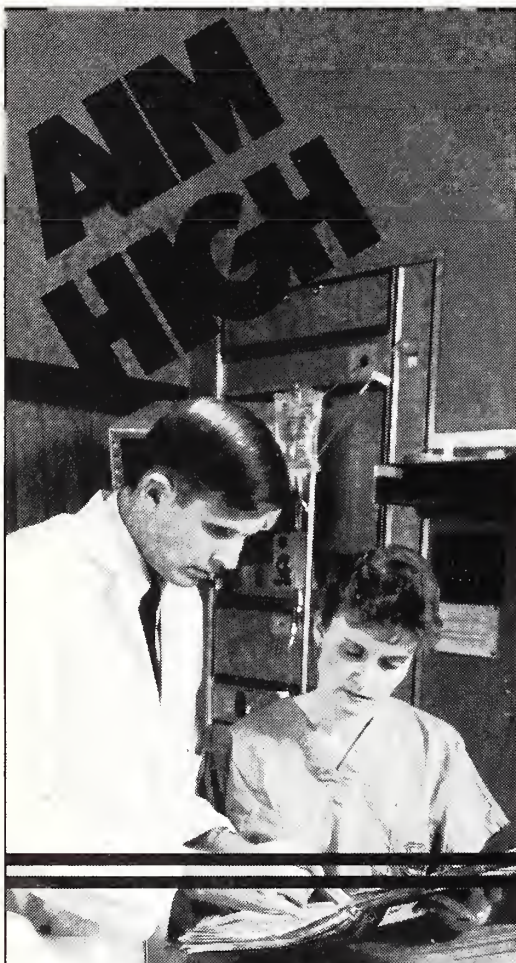
OUT OF STATE

Robinson, Dianna Lynne, Anesthesiology. Medical Education, UAMS, 1982. Internship/Residency, Scott and White Memorial Hospital, 1983/1985.

Thompson, Jerome Walter, Pediatric Otorhinolaryngology. Medical Education, University of California College of Medicine, Los Angeles, 1976. Internship/Residency, UCLA, 1977/1981. Board certified.

STUDENTS

Jeff B. Marotte
Joel Christian Milligan



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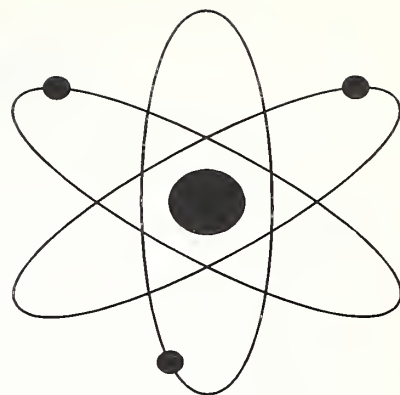
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Radiological Case of the Month

David Bevans, M.D.
David Harshfield, M.D.



History:

61-year-old white male with a routine physical examination chest x-ray suggesting a left lower lobe mass.



Figure 1



Figure 2

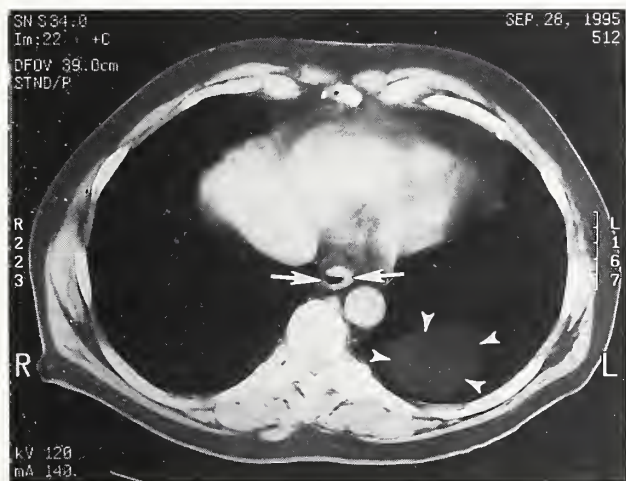


Figure 3

FIGURE 1: This PA chest film reveals alteration of the contour of the left hemidiaphragm (arrows). This has the appearance of an eventration (a partial or complete failure of muscle development in the hemidiaphragm with a thin sheet of fibrous tissue remaining).

FIGURE 2: On the lateral view, the plain film reveals no definite eventration, but findings suggesting a low density soft tissue mass (arrows) projected over the thoracic spine just above the hemidiaphragm. By triangulating the position of the abnormality on the AP and lateral views, this would place the lesion in the posterior aspect of the left lower lobe.

FIGURE 3: This 10mm CT section reveals the soft tissue mass (arrow heads) in the expected location with attenuation numbers consistent with fat. Also, incidental notation is made of a hiatal hernia (arrows).

Diaphragmatic Hernias

Diagnosis:

Diaphragmatic hernias 1: Hiatus hernia and 2: Bochdalek hernia.

Discussion:

The standard chest radiograph is a very fertile source of radiographic findings specific for alteration of the diaphragm and presence of diaphragmatic herniation. On the PA chest film in this patient, the local bulge seen in the medial aspect of the left hemidiaphragm could be mistaken for a partial eventration. This incomplete muscular development of the diaphragm can produce a number of interesting contour changes of the diaphragm and if complete eventration occurs, it could be confused with paralysis of the diaphragm or diaphragmatic herniation.

Diaphragmatic hernias are most commonly seen associated with the hiatus hernia with the subtypes being the typical sliding variety and the paraesophageal herniation. The sliding hiatus hernia is the presence of any portion of the stomach protruding through the diaphragmatic hiatus into the chest. Generally, the distal esophagus is attached to the diaphragm by the phrenoesophageal membrane. In adults, the elasticity of this membrane diminishes along with the ability to pull the stomach back into the abdominal cavity and this sliding hiatus hernia can become a permanent herniation. Once the GE junction is in the chest cavity, the anti-reflux design of the gastroesophageal junction is lost. Persistent reflux produces spasm, of the transverse and longitudinal muscles of the esophagus further exacerbating the problem. A paraesophageal hiatus hernia is less common than the sliding Hiatus hernia. The cardia of the stomach is in a normal position, however a pouch (usually the fundus) of the stomach herniates into the left hemithorax either through the hiatus or through a separate opening in the diaphragm adjacent to the hiatus. The paraesophageal hernia is potentially a surgical disease because the veins draining the herniated gastric pouch may become obstructed and hemorrhage.

The patient presented in the case report, in addition to having a common variety sliding hiatal hernia, also has a hernia through the foramen of Bochdalek. This condition is slightly more common in infants and when the diaphragmatic defect is large, can be potentially life threatening. This defect in the diaphragm lies posteriorly and immediately lateral to the spine and is a congenital defect in the pleuroperitoneal membrane. A hemispheric bulge involving the posterior aspect of the hemidiaphragm may be the first clue to the diagnosis on a plain chest radiograph. The majority of the Bochdalek hernias are left sided as a result of earlier closure of the right pleuroperitoneal canal and relative protection by the liver. Symptomatology in patients with Bochdalek herniation is based on the size of the diaphragmatic defect. If the defect is large, visceral herniation involving the stomach, spleen, large or small bowel, omentum or kidney can occur. In the smaller herniations, as is seen in this patient, generally the content is peritoneal fat.

The least common of the diaphragmatic hernias are the foramen of Morgagni herniations. This diaphragmatic defect is anterior, immediately behind the sternum in the muscle clefts containing the mammary vessels. These tend to be more common on the right because of the relative protection by the pericardium to seal the opening on the left. These are generally small and asymptomatic, however they may contain any part of the colon or terminal ileum. These lesions, on chest radiograph, typically are seen as densities in the right cardiophrenic sulcus and may contain fluid levels. The lateral view demonstrates that the lesion lies anteriorly.

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4. Whittaker, L.D., Jr., et al.: Hernias of foramen of Bochdalek in children, *Mayo Clin. Proc.* 43:580, 1959

Author: David Bevans, M.D., is with North Little Rock Surgery Center.

Editor: David Harshfield, M.D., is Director of Radiology at Riverside Imaging Center and Clinical Associate Professor of Radiology at UAMS.

In Memoriam

J. W. Carney, M.D.

Dr. J. W. Carney, of Newport, died Tuesday, April 2, 1996. He was 66. Survivors include his wife, Virginia (Holt) Carney of Newport; sons, John Carney of Cabot, Dr. Steve Carney of Sikeston, Mo., and Chuck Carney of Fayetteville; daughter, Elaine Goad of Tyler, Texas; brother, Clyde L. Carney of Memphis; and six grandchildren.

K. W. (Bing) Cosgrove, Jr., M.D.

Dr. K. W. (Bing) Cosgrove, Jr., of Little Rock, died Wednesday, March 13, 1996. He was 63. Survivors include his wife; three daughters, Dr. Lisa Cosgrove of Cocoa Beach, Fl., Jill Benson of Benton, and Tina Goacher of Little Rock; a son, Thomas Cosgrove; six grandchildren and two sisters, Carolyn Schaufele of Little Rock and Mary Ratcliff of Lubbock, Texas.

Leston E. Fitch, M.D.

Dr. Leston E. Fitch, of Conway, died Wednesday, March 27, 1996. He was 85. Survivors include his wife, Margaret, two daughters, two brothers, one sister, four grandchildren, and one great-grandchild.

Charles Robert Winn, Jr., M.D.

Dr. Charles Robert Winn, Jr., of Little Rock, died Saturday, March 9, 1996. He was 70. Survivors include cousins, Mary Lou Billingsley, Suzanna Wetherington, Michael Reece McQueen, Harry Eugene McQueen, Samuel Joshua McQueen, Mary Caria Thompson and Nora Lee Gordon.



Resolutions

K. W. Cosgrove, Jr., M.D.

WHEREAS, the membership of the Pulaski County Medical Society notes with genuine sadness the recent death of a long-time member, K. W. Cosgrove, Jr., M.D.; and
WHEREAS, his membership in this Society extended through four decades and was marked by tireless service and devotion; and
WHEREAS, Dr. Cosgrove earned the respect and fondness of countless students and patients during thirty years of practicing and teaching his chosen specialty of Ophthalmology;
BE IT THEREFORE RESOLVED:
THAT, this resolution be adopted and filed in the permanent files of this Society; and
THAT, a copy of this resolution be mailed to Dr. Cosgrove's family as an expression of our sincere sympathy; and
THAT, a copy of this resolution be made available to *The Journal of the Arkansas Medical Society* for publication.

Robert W. Ross, M.D.

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of an esteemed colleague, Robert W. Ross, M.D.; and
WHEREAS, his desire to advance the medical profession was clearly demonstrated by fifty years of loyal service to this Society and numerous other professional organizations; and
WHEREAS, Dr. Ross' service as a flight surgeon in the United States Navy during World War II was marked by undaunted courage and patriotism; and
WHEREAS, Dr. Ross will long be remembered by his patients and peers alike as a caring and compassionate physician;
BE IT THEREFORE RESOLVED:
THAT, this resolution be adopted and placed in the archives of this Society; and
THAT, a copy of this resolution be forwarded to Dr. Ross' family as a token of our genuine sadness; and
THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

Charles R. Winn, Jr., M.D.

WHEREAS, the members of the Pulaski County Medical Society are saddened by the recent death of a respected colleague, Charles R. Winn, Jr., M.D.; and
WHEREAS, Dr. Winn was a loyal member of this organization for thirty-nine years, continually striving for its betterment; and
WHEREAS, Dr. Winn was greatly admired by his patients, his fellow physicians, and the community at large for the skill and sympathy he displayed in the practice of medicine;
BE IT THEREFORE RESOLVED:
THAT, this resolution be adopted and placed in the archives of this Society; and
THAT, a copy be sent to Dr. Winn's family as a token of our heart-felt sorrow; and
THAT, a copy be made available to *The Journal of the Arkansas Medical Society* for publication.

All Resolutions Adopted
Board of Directors
March 20, 1996

By Order of the Memorials Committee
Fred O. Henker, III, M.D., Chairman

Things To Come

June 6 - 9

Symposium on Computer Assisted Radiology S/CAR '96. Denver Marriott Hotel City Center, Denver, Colorado. Sponsored by the Society for Computer Applications in Radiology. Co-sponsored by the University of Colorado Health Sciences Center. For more information, call (703) 716-7548.

June 26 - 29

2nd Annual Conference on Emergency & Wilderness Medicine - Challenges From the Heart of the City to the Top of Everest. Beaver Run Resort, Breckenridge, Colorado. Sponsored by Symposia Medicus. For more information, call (800) 327-3161 or (510) 935-7889.

July 25 - 27

Clinical Allergy for the Practicing Physician. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

July 29 - August 2

Dynamic Psychotherapy in the New Era: Possibilities and Problems. The Given Biomedical Institute, Aspen, Colorado. Sponsored by the American Psychiatric Association Office of Education. For more information, call (202) 682-6145.

September 6 - 7

3rd Annual Current Topics in Cardiothoracic Anesthesia. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington Univ. School of Medicine. For more information, call 1-800-325-9862.

October 9 - 13

Infectious Disease '96 Board Review Course - A Comprehensive Review for Board Preparation. The Hyatt Regency Hotel, Washington, D.C. Sponsored by the Center for Bio-Medical Communication. For more information, call (201) 385-8080.

October 17 - 19

Contemporary Cardiothoracic Surgery. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

November 1 - 3

New Developments in the Pathogenesis & Treatment of NIDDM (non-insulin dependent diabetes mellitus). Radisson Resort, Scottsdale, Arizona. Sponsored by the American Diabetes Association of Arizona and the National Institute of Diabetes and Digestive and Kidney Diseases. For more information, call (602) 995-1515.

November 20 - 24

90th Annual Scientific Assembly - Yesterday's Caring with Today's Technology. Baltimore Convention Center, Baltimore, Maryland. Sponsored by the Southern Medical Association. For more information, call (800) 423-4992 or (205) 945-1840.

December 7

Cardiology Seminar. Washington University Medical Center, St. Louis, Missouri. Sponsored by the Office of Continuing Medical Education, Washington University School of Medicine. For more information, call 1-800-325-9862.

Keeping Up

May 31 - June 2

18th Annual Family Practice Intensive Review Course. *Sponsored by UAMS College of Medicine, Department of Family and Community Medicine. Location: UAMS, Education II Building, Little Rock. Category I credit hours offered and fee: TBA.*

June 14

Vitamins in Alternative Medicine. *Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.*

June 23 - 28

Intensive Workshop in Health Care Ethics. *Sponsored by UAMS Division of Medical Humanities. Location: Freeway Medical Center, Suite 500, Little Rock. Fee: \$375 - includes all course materials, breakfast, receptions and two dinners. Category I credit hours offered: TBA. For more information, call: 501-661-7970.*

June 28

Annual AHEC Fort Smith CME Seminar. *Sponsored by UAMS AHEC - Fort Smith. Location: Holiday Inn, Fort Smith. Category I credit hours offered: TBA. For more information, call: 501-785-2431.*

June 28

Hemodialysis Access Problems. *Sponsored by National Park Medical Center. Location: National Park Medical Center, Ozark - Quapaw Rooms. No fee. For more information, call: 501-620-1420.*

Recurring Education Programs

The following organizations are accredited by the Arkansas Medical Society to sponsor continuing medical education for physicians. The organizations named designate these continuing medical education activities for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE-VA MEDICAL CENTER

*General Internal Medicine Review, Wednesdays, 12:00 noon, Room 238 Bldg. 1
Medical Grand Rounds/General Medical Topics, Thursdays, 12:00 noon, Auditorium, Bldg. 3*

HARRISON-NORTH ARKANSAS MEDICAL CENTER

Cancer Conference, 4th Thursday, 12:00 noon, Conference Room

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

*Faculty Resident Seminar, 3rd Thursday, 12:00 noon, Sturgis Auditorium
Genetics Conference, Tuesdays, 1:00 p.m., Conference Room, Springer Building
Infectious Disease Conference, 2nd Wednesday, 12:00 noon, 2nd Floor Classroom
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Bldg., Auditorium
Pediatric Neuroscience Conference, 1st Thursday, 8:00 a.m., 2nd Floor Classroom
Pediatric Pharmacology Conference, 5th Wednesday, 12:00 noon, 2nd Classroom
Pediatric Research Conference, 1st Thursday, 12:00 noon, 2nd Floor Classroom*

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

*Arkansas Blood & Cancer Society Conference, 6th Thursday, 7:30 p.m., Terrace Restaurant
Cancer Conferences, Thursdays, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
General Surgery Grand Rounds, 1st Thursday, 7:00 a.m. Southwestern Bell/Arkla Room. Light breakfast provided.*

Interdisciplinary AIDS Conference, 2nd Friday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Journal Club, Tuesdays, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Mental Health Conference, 3rd Wednesday, 12:00 noon, Southwestern Bell/Arkla room. Lunch provided.
Pulmonary Conference, 4th Wednesday, 12:00 noon, Southwestern Bell/Arkla Room. Lunch provided.
Spine Center Conference, 1st Wednesday, 7:00 a.m., Southwestern Bell/Arkla Room. Light Breakfast provided.
Urology Grand Rounds, September 17th and November 5th, 5:30 p.m., Southwestern Bell/Arkla Room, Refreshments provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Breast Conference, 3rd Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, Wednesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Pathology Conference, 1st Tuesday, 3:00 p.m., Pathology Library
Pediatric Grand Rounds, Tuesdays, 12:00 noon, Especially for Women Resource Room, 2nd floor/BMC. Category 1 credit available. Lunch provided.
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. Lunch provided.
Sleep Case Conference, Fridays, 12:00 noon. Call BMC ext. 1902 for location. Lunch provided.

MOUNTAIN HOME-BAXTER COUNTY REGIONAL HOSPITAL

Lecture Series, 3rd Tuesday, 6:30 p.m., Education Building
Tumor Conference, Tuesdays, 12:00 noon, Carti Boardroom

NORTH LITTLE ROCK-BAPTIST MEMORIAL HOSPITAL

Chest & Problems Case Conference, 3rd Wednesday, 12:00 noon, Assembly room. Lunch provided.
Grand Rounds, 1st Monday (3rd, chest), 12:00 noon, Assembly room.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

LITTLE ROCK-UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

ACRC Oncology Forum, Thursdays, 4:00 p.m., UAMS ACRC 2nd Floor Board room, 1.5 credits
Anesthesia Lecture Series, Wednesdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Anesthesia Morbidity & Mortality Conference, Tuesdays, 6:45 a.m.; 2nd & 4th Thursdays, 4:00 p.m., UAMS Education Bldg., room G/110 A&B
Cardiology Graphics Conference, Tuesdays, 12:00 noon, VAMC, room 5C114
CARTI North Tumor Board Cancer Conference, 2nd Wednesday, 12:00 noon, CARTI North, Searcy
Cardiothoracic Surgery Conference, date, time, & location varies
Cardiothoracic Surgery Monthly Journals Club, 4th Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Cardiothoracic Surgery Morbidity & Mortality Conference, 2nd Saturday, 9:30 a.m., UAMS Surgery Dept. Library, room 2S/28D
Child Psychiatry Update/Case Conference, 3 Fridays per month, 1:00 p.m., ACH Child Study Center conference room
CME Outreach Program, dates, times & locations vary
EKG Conference, Mondays, noon, VAMC, room 5C114
Emergency Medicine Didactic Conference 1, Thursdays, 7:00 a.m. UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 2, Thursdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Didactic Conference 3, Thursdays, 9:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 1, Tuesdays, 7:00 a.m., UAMS Education Bldg., room G/110A&B
Emergency Medicine Grand Rounds 2, Tuesdays, 8:00 a.m., UAMS Education Bldg., room G/110A&B
Endocrinology Case Conference, Fridays, 7:30 a.m., ACRC 3rd floor conference room
Family Practice Grand Rounds, Tuesdays, 12:15 p.m., Family Practice Center, 6th and Elm
Gastroenterology Grand Rounds, Thursdays, 4:00 p.m., Gastroenterology conference room, 3D29
GI/Radiology Conference, Tuesdays, 8:00 a.m., UAMS Radiology conference room, M1/293
Hematology/Oncology Fellow's Forum, Fridays, 8:15 a.m., ACRC Betsy Blass conference room
Joint Cardiology-Cardiovascular Thoracic Surgery, Wednesdays, noon, UAMS, room S306
LR Cancer Conference, Wednesdays, 12:00 noon, UAMS ACRC conference room 3 times a month, CARTI Auditorium once a month
LR Vascular Conference, time & date varies monthly, rotates between UAMS, SVI & BMC
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Bldg., room G/131A&B
Med/Path Conference, 3rd or 4th Tuesday, 3:00 p.m., UAMS Shorey Bldg., room S/306
Medicine Journal Club, alternate Thursdays, 7:30 a.m., ACC Medicine Clinic conference room
Medicine Research Conference, Wednesdays (except 3rd), 4:30 p.m. UAMS Education Bldg. room B/135
Neurology-Neuropathology Conference, Wednesday's, 4:00 p.m., Room 2E-142 at VAMC
Neurology-Neuradiology Conference, Wednesday's, 5:00 p.m., Room 2E-142 at VAMC
Neuroscience Clinical Grand Rounds, Monday's, 3:00 p.m., Betsy Blass Conference Room, Arkansas Cancer Research Center

Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33
Neuroscience Conference (Basic & Clinical), Wednesdays, 4:00 p.m., UAMS 7C
Neurosurgery Journal Club, 2nd & 4th Thursdays, 8:00 p.m., 2 credit hours
Neurosurgical Pathology Conference, Thursdays, 4:00 p.m., VAMC-LR Neuropathology conference room, 2E141
OB/GYN Fetal Boards, 2nd Fridays, 8:00 a.m., ACH Sturgis Bldg.
OB/GYN Grand Rounds, Wednesdays, 7:45 a.m., UAMS Education Bldg., room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS Jones Eye Institute, 2 credit hours
Ophthalmology Residency Morning Lectures, Mondays, Wednesdays, Fridays, 7:30 a.m., UAMS Jones Eye Institute
Orthopaedic Basic Science Conference, Tuesdays, 8:00 a.m., UAMS Education Bldg., room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Bldg., room B/135, 1.5 credit hours
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Bldg., room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Bldg., room B/135
Pathology Autopsy Conference, Wednesdays, 12:00 noon, VAMC-LR Morgue
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
Surgery Basic Sciences Conference, 1st Saturday, 7:30 a.m., ACRC 2nd floor conference room
Surgery Grand Rounds, Saturdays, 8:30 a.m., ACRC 2nd floor conference room
Surgery Morbidity & Mortality Conference, Saturdays, 9:30 a.m., ACRC 2nd floor conference room
Surgery Resident Case Conference, Saturdays (except 1st), 7:30 a.m., ACRC 2nd floor conference room
Trauma Morbidity & Mortality Conference, date & time varies monthly, ACRC 2nd floor conference room
Urology Adult Subject Oriented Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Basic Sciences Conference, 2nd Tuesdays, 5:00 p.m., VAMC-LR, 4D resident office
Urology Clinical Didactic Conference, 3rd Tuesday, 5:00 p.m., VAMC-LR, 4D
Urology Formal Teaching (Grand) Rounds, once or twice monthly, 5:00 p.m., VAMC-LR, 4D
Urology Journal Club, once a month, 5:00 p.m., VAMC-LR, 4D
Urology Morbidity & Mortality Conference, once monthly, 5:00 p.m., VAMC-LR, 4D
Urology Pathology Conference, 4th Thursday, 5:00 p.m., VAMC-LR, 4D
Urology Pediatric Conference, once monthly, 5:00 p.m., ACH Sturgis Bldg., Clinic 2
Urology Pre-op/Didactic Conference, Mondays, 5:00 p.m., VAMC-LR, 4D
Urology Radiology Conference, 1st Thursday, 5:00 p.m., UAMS, Radiology Department
Urology Teaching Conference, Wednesdays, 5:00 p.m., VAMC-LR, 4D
Urology VA Teaching Rounds, every Friday, 7:30 a.m., VAMC-LR, 4D
Uro-radiology Conference (Urologic Imaging), 1st Tuesdays, 5:00 p.m., UAMS Radiology conference room
VA Chest Conference (combined Surgical/Medical Chest Conference), Mondays, 12:15 p.m., VAMC-LR, room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine conference room, room 1D173
VA GRECC/Geriatric Research Conference, Tuesdays, 4:00 p.m., VAMC-LR, room 2D109
VA Hematology/Oncology Conference, Thursdays, 8:15 a.m., VAMC-LR Pathology conference room 2E142
VA Lung Cancer Conference, Thursdays, 3:00 p.m., VAMC-LR, room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Bldg. 68 room 130
VA Medicine-Pathology Conference, Tuesday, 2:00 p.m., VAMC-LR, room 2D109
VA Medicine Resident's Clinical Case Conference, Fridays, 12:00 noon, VAMC-LR, room 2D08
VA Physical Medicine & Rehab Grand Rounds, 4th Friday, 11:30 a.m., VAMC-NLR Bldg. 68, room 118 or Baptist Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine Conference, 2nd, 3rd, & 4th Thursdays, 8:00 a.m., VAMC-NLR Bldg. 68, room 118
VA Weekly Cancer Conference, Monday, 3:00 p.m., VAMC-LR, room 2E-142
White County Memorial Hospital Medical Staff Program, once monthly, dates & times vary, White County Memorial Hospital, Searcy

EL DORADO-AHEC

Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., Warner Brown Campus, 6th floor Conf. Rm.
Behavioral Sciences Conference, 1st & 4th Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, 3rd Wednesday, 12:15 p.m., Union Medical Campus, Conf. Rm. #3. Lunch provided.
Dermatology Conference, 1st Tuesdays and 1st Thursdays, AHEC - South Arkansas
GYN Conference, 2nd Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, 1st, 2nd & 4th Wednesday, 12:15 p.m., AHEC-South Arkansas
Noon Lecture Series, 2nd & 4th Thursday, 12:00 noon, Union Medical Campus, Conf. Rm. #3. Lunch provided.
Pathology Conference, 2nd Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5. Lunch provided.
Pediatric Conference, 3rd Friday, 12:15 p.m., AHEC - South Arkansas
Pediatric Case Presentation, 3rd Tuesday, 3rd Friday, AHEC - South Arkansas
Arkansas Children's Hospital Pediatric Grand Rounds, every Tuesday, 8:00 a.m., AHEC - South Arkansas (Interactive video)
Pathology Conference, 2nd Tuesday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, 4th Thursday, 12:15 p.m., AHEC - South Arkansas
Surgical Conference, 1st, 2nd & 3rd Monday, 12:15 p.m., AHEC - South Arkansas
Tumor Clinic, 4th Tuesday, 12:15 p.m., Warner Brown Campus, Conf. Rm. #5, Lunch provided.

FAYETTEVILLE-AHEC NORTHWEST

AHEC Teaching Conferences, Tuesdays & Wednesdays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Fridays, 12:00 noon, AHEC Classroom

AHEC Teaching Conferences, Thursdays, 7:30 a.m., AHEC Classroom

Medical/Surgical Conference Series, 4th Tuesday, 12:30, Bates Medical Center, Bentonville

Primary Care Conferences, 1st & 3rd Mondays, 12:00, every Tuesday 7:30 a.m., Washington Regional Medical Center

FORT SMITH-AHEC

AHEC Residency Program Noon Conferences, 12:30 p.m., Tuesday-Friday, AHEC Building

Grand Rounds, 12:00 noon, first Wednesday of each month, Sparks Regional Medical Center

Tumor Conference, Mondays, 12:00 noon, St. Edward Mercy Medical Center

Tumor Conference, Wednesdays, 12:00 noon, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, 1st & 3rd Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Regional Medical Center. Lunch provided.

Arkansas Methodist Hospital CME Conference, 7:30 a.m., Hospital Cafeteria, Arkansas Methodist Hospital, Paragould

Chest Conference, 2nd Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Citywide Cardiology Conference, 3rd Thursday, 7:30 p.m., Jonesboro Holiday Inn

Clinical Faculty Conference, 5th Tuesday, St. Bernard's Regional Medical Center, Dietary Conference Room, lunch provided

Craighead/Poinsett Medical Society, 1st Tuesday, 7:00 p.m. Jonesboro Holiday Inn

Independence County Medical Society, 2nd Tuesday, 7:30 p.m., Batesville Country Club, Batesville

Interesting Case Conference, 4th Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Jackson County Medical Society, 3rd Thursday, 7:00 p.m., Newport Country Club, Newport

Kennett CME Conference, 3rd Monday, 12:00 noon, Twin Rivers Hospital Cafeteria, Kennett, MO

Methodist Hospital of Jonesboro CME Conference, 2nd Tuesday, 7:00 p.m., Cafeteria, Methodist Hospital of Jonesboro

Neuroradiology Conference, 3rd Friday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Orthopedic Case Conferences, every other month beginning in January, 7:30 a.m., Northeast Arkansas Rehabilitation Hospital

Perinatal Conference, 2nd Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Pocahontas CME Conference, 3rd Wednesday, 12:00 noon & 7:30 p.m., Randolph County Medical Center Boardroom

Tumor Conference, Thursdays, 12:00 noon, St. Bernard's Dietary Conference Room. Lunch provided.

Walnut Ridge CME Conference, 3rd & last Tuesday, 12:00 noon, Lawrence Memorial Hospital Cafeteria

White River CME Conference, 3rd Thursday, 12:00 noon, White River Medical Center Hospital Boardroom

PINE BLUFF-AHEC

Behavioral Science Conference, 1st & 3rd Thursday, 12:00 noon, Jefferson Regional Medical Center

Chest Conference, 2nd & 4th Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, 1st & 4th Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, 3rd Friday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, 2nd & 4th Wednesday, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, 2nd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, 2nd & 4th Thursday, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, 3rd Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, 3rd Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, 4th Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Surgery Conference, 1st Friday, 12:00 noon, Jefferson Regional Medical Center

Tumor Conference, 1st Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Chest Conference, every other 3rd Wednesday, 12:30 p.m., St. Michael Hospital

Neuro-Radiology Conference, 2nd & 4th Tuesday, 12:00 noon, Wadley Regional Medical Center

Tumor Board, Fridays, except 5th Friday, 12:00 noon, Wadley Regional Medical Center & St. Michael Hospital

Tumor Conference, every 5th Friday, 12:00 noon alternates between Wadley Regional Medical Center & St. Michael Hospital

The Journal of the Arkansas Medical Society

Index 1995-1996

Volume 92, Numbers 1 - 12

(O) Original Article; (SP) Special Article; (OB) Obituary; (R) Resolution; (E) Editorial

-A-

AAFP's 1996 Family Physician of the Year (SP) 280
 Abel, Lee (E) 268
 Accidents in Arkansas 1991-93, Bicycle/Automobile (SP) 72
 Acute Pancreatitis as the First Manifestation of
 Hyperparathyroidism in an otherwise Asymp-
 tomatic Patient (O) 273
 Adametz, James (O) 253
 AMS Newsmakers 56, 103, 145, 193, 255, 309, 357,
 420, 443, 493, 540, 615
 American Medical Association:
 Ethical Issues in Managed Care (SP) 127
 Fundamental Elements of the Patient-Physician
 Relationship (SP) 128
 An Emergency Room Short Story (SP) 188
 Antiretroviral Therapy 1996 (SP) 499
 Archer, Charles Andrew, Jr. (OB) 256
 Arkansas Foundation for Medical Care:
 Progress Report: AFMC as a Quality Foundation
 (SP) 277
 The Cooperative Cardiovascular Project (SP) 617
 The Relationship of Episiotomy to Third and
 Fourth Degree Lacerations (O) 447
 The Role of International Normalized Ratio
 (INR) in Clinical Practice (SP) 178
 Arkansas HIV/AIDS Report 44, 88, 136, 184, 250,
 300, 348, 408, 460, 512, 592, 636
 Arkansas Medicaid Fact Sheet (SP) 491
 Arkansas Medical Society:
 1995 AMS Membership Roster (SP) 363
 1995 AMS Schuffield Award (SP) 37
 1995 Annual Session Exhibitors (SP) 34
 1995 Annual Session Sponsors (SP) 32
 1995 Convention Keynote Speakers (SP) 10
 1995 Grand Prize Winners (SP) 35
 1995 MED-PAC Contributors (SP) 582
 1996 MED-PAC Contributors (SP) 581
 120th AMS Annual Session Schedule & Speakers
 (SP) 542
 AMS Accomplishments (SP) 620
 AMS Annual Session Registration Form (SP) 547
 AMS Business Reports for Reference Committee
 #1 (SP) 559
 AMS Business Reports for Reference Committee
 #2 (SP) 571
 AMS House of Delegates (SP) 553

AMS Nominating Committee (SP) 556
 AMS President Profile (SP) 9
 AMS Reference Committee Agenda (SP) 558
 Arkansas Pathology Society Report (SP) 30
 Arkansas Urologic Society (SP) 30
 Convention Highlights (SP) 544
 Farewell Address (SP) 23
 Fifty Year Club (SP) 36
 House of Delegates Composition (SP) 12
 Inaugural Address (SP) 7
 Proceedings of the 119th Annual Session (SP) 14
 Young Physicians Committee Report (SP) 30
 Arkansas Medical Society Alliance:
 AMS Alliance Health Project Report (SP) 226
 AMS Alliance Presidential Address (SP) 28
 AMS Alliance 71st Annual Session Report (SP) 27
 Avery, J. Kelley (SP) 79, 171, 239, 293, 399, 449, 505

-B-

Barnett, James Claude (OB) 598
 Beaton, J. Neal (O) 253
 Beck, Joseph M. (SP) 499
 Berner, Dennis W. (O) 517
 Bevans, David (O) 415, 639
 Black, H. Thurston (OB) 425 (R) 521
 Bourne, David (O) 159
 Brasher, Russell (SP) 277
 Burpeau, John (O) 119
 Byrum, Jerry (E) 324

-C-

Caldwell, Charles R., Jr., (O) 629
 Calkins, Joe B., Jr., (O) 629
 Carney, J. W. (OB) 641
 Cardiology Commentary & Update:
 An Update on Cardiogenic Shock (O) 341
 Diagnosis and Treatment of Acute Coronary
 Ischemic Syndromes: An Update for 1995 (O) 129
 Dicrotism: Examples and Review of the Dicrotic
 Pulse (O) 507
 Expanding Indications for Thrombolytic Therapy
 (O) 240
 Heparin Associated Thrombocytopenia (O) 173
 Hypertrophic Obstructive Cardiomyopathy (O) 629

Pericardial Effusion (O) 295
Recent Advancements in the Management of
Sudden Cardiac Death: Implantable
Antiarrhythmic Devices (O) 41
The Complete Cardiac Diagnosis (O) 401
The Monoclonal Antibody, 7E3 and Treatment of
Coronary Artery Disease (O) 453
Third Generation Plasminogen Activators in the
Treatment of Acute Myocardial Infarction (O) 587
Thrombolytic Therapy in Patients with an
Abnormality of Blood Coagulation (O) 81
Casteel, Helen Butler (O) 390
Chen, Marian (SP) 178
Cleves, Mario (SP) 277
Common Bacterial Sexually Transmitted Diseases in
Pregnancy (O) 75
Communicable Diseases to the ADH, Instructions
for Reporting (SP) 456
Cosgrove, K. W., Jr. (OB) 641 (R) 641
Cutting Red Tape on Clinical Labs: Why Congress
Should Deregulate Doctors (SP) 283

-D-

Darville, Toni (O) 165
Davaatseren, N. (O) 122
DeLoach, John (O) 415
Dickins, Robert D. (O) 595
Didier, Donna (SP) 277
Dietz, Tracy (O) 240
Diffuse Cavernous Hemangioma - A Case Report
and Review of the Literature (O) 119
Domestic Violence, A Physician's Personal Experience
with (SP) 213
Domestic Violence, A Survivor's Personal Experience
with (SP) 211
Domestic Violence, Facts About (SP) 229
Domestic Violence, Recognizing & Treating Victims
of (SP) 215
Domestic Violence Referral Numbers, Arkansas (SP) 232
Domestic Violence, The Physician's Responsibility
and (E) 209
Double Stamps on Wednesday (E) 436

-E-

Echinococcosis in Magnolia, Management of (O) 122
Eidt, John F. (O) 517
EMS Into the Emergency Room, Getting (E) 68
Emergency Physicians and AMS Update Equipment
in State Capitol Infirmary (SP) 71
Emergency Room Short Story, An (SP) 188
English, Jim (SP) 214
Episiotomy to Third and Fourth Degree Lacerations,
The Relationship of (O) 447
Ethical Issues in Managed Care (SP) 127

Everybody's Doing It: A P.E.T. peeve or a public
service? (E) 268
Everyone is interested in Health (maybe too interested);
History of a Retired Physician *before being over-*
whelmed by everyone interested in health (E) 156

-F-

Familial Variables and Domestic Violence (SP) 222
Fielder, Charles (O) 415
Finkbeiner, Alex E. (E) 116, 436
Fitch, Leston E. (OB) 641
Floss, Robert A. (SP) 188
From One Physician to Another: The indiscrimination of
domestic violence & what one physician is doing
to help heal the scars (SP) 214
Fundamental Elements of the Patient-Physician
Relationship (SP) 128

-G-

Galactosemia to Arkansas, Introduction of Newborn
Screening for (O) 501
Galactosemia, Update: Newborn Screening for (O) 539
Gardner, Guy (O) 253
Gartman, Joseph F. (OB) 146
Gastroesophageal Reflux in Children (O) 390
Gibson, James B. (O) 501, 539
Golden, William E. (SP) 178, 277, 336, 447, 617
Golper, Thomas A. (O) 240
Good Times Are Coming (E) 608
Gordon, Vida Hildreth (OB) 146 (R) 309
Grigg, Kelly G. (O) 93, 189, 307

-H-

Hale, Cheryl (O) 329
Harshfield, David L. (O) 93, 189, 307, 415, 517, 639
Harris, C. Lynn (OB) 472
Harris, Walter Preston (OB) 104
Hayes, John (O) 415
Henry, J. Arnold (OB) 357
Herron, John T. (R) 104
Hill, Norman Ray (OB) 472
Hiller, Charles (O) 240
Hyperparathyroidism in an otherwise Asymptomatic
Patient, Acute Pancreatitis as the First Manifestation
of (O) 273

-I-

In Memoriam 30, 57, 104, 146, 193, 256, 357, 425, 472, 521,
598, 585
Instructions for Reporting Communicable Diseases
to the ADH (SP) 456

International Normalized Ratio (INR) in Clinical Practice, The Role of (SP) 178
 Introduction of Newborn Screening for Galactosemia to Arkansas (O) 501

-J-

Jacobs, Richard F. (O) 159

-K-

Keeping Up 60, 108, 148, 196, 259, 315, 359, 427, 475, 523, 599, 643
 Kellar, Stan L. (O) 307
 Kemp, Karlton Hubert (OB) 57 (R) 57
 Kirby, Russell S. (O) 623
 Kirkman, Caswell Macon Thompson (OB) 193
 Krucoff, Mitchell W. (O) 129

-L-

Lambert, Robert A. (SP) 72
 Landrum, Samuel E. (E) 68, 204, 388, 608
 Lawhorn, Stephanie L. (O) 173
 Legislature Meet with Arkansas Congressional Delegates, Physician Members of Arkansas (SP) 339
 Leon, M. N. (O) 273
 Lockhart, William G. (OB) 472
 Loss Prevention Case Study:
 Frozen Section Error? - Rare But Disastrous (SP) 171
 Headache - An Important Symptom (SP) 449
 Loss of Chance (SP) 239
 Medical Ethics vs. Managed Care: Medical Journals Voice Physicians' Concerns (SP) 125
 Physician-to-Physician Communication (SP) 505
 Post Cesarean Section Death (SP) 79
 Primary Care Equals Primary Responsibility (SP) 399
 Recertification - A Real Hazard (SP) 293
 Lu, Eugene (O) 623
 Ludwig, Frank (O) 415

-M-

Mahkorn, Sandra (SP) 283
 Managed Care - *Are We Ready for the Changes?* (E) 324
 Managed Care, Ethical Issues in (SP) 127
 Management of Echinococcosis in Magnolia (O) 122
 Matchett, W. Jean (O) 517
 Matlock, Tracy (SP) 222
 Maxson, Suzanne (O) 159
 Measles Outbreak in Arkansas, A Recent (O) 159
 Medicaid Fact Sheet, Arkansas (SP) 491
 Medicine in the News 55, 101, 143, 193, 255, 310, 357, 421, 439, 487, 533, 611
 Menard, John (O) 165
 Mixon, Donn (SP) 218

-N-

New Member Profile 305, 413, 445, 495,
 New Members 50, 90, 138, 186, 252, 303, 351, 411, 463, 515, 594
 Newborn Screening for Galactosemia to Arkansas, Introduction of (O) 501
 Newborn Screening for Galactosemia, Update (O) 539
 Newborn Screening in Arkansas, Overview of (O) 329
 Nicholson, Hayden Coler (OB) 520
 Nikolaidis, L. A. (O) 273
 Nix, Lee (O) 517
 Nokes, Steven R. (O) 51, 141, 253, 353, 469, 595
 Nyamkhuu, G. (O) 122

-O-

Old Fashioned Soda Fountain Stirs Up Memories at Pine Bluff's Band Museum (SP) 497
 One Doctor's *Field of Dreams* (SP) 334
 Otogondalai, A. (O) 122
 Outdoor MD (SP) 188, 306, 414, 467, 514
 Overview of Newborn Screening in Arkansas (O) 329
 Owings, Debra Lynn Velez (OB) 425 (R) 521

-P-

Parker, Douglas Walter, Jr. (OB) 146
 Parkhurst, Rod (O) 629
 Paslidis, Nick (O) 119, 273
 Patient-Physician Relationship, Fundamental Elements of the (SP) 128
 Pediatric HIV, Recent Advances in (O) 165
 Pertussis in Arkansas (O) 623
 Physician Members of Arkansas Legislature Meet with Arkansas Congressional Delegates (SP) 339
 Pierce, W. Bradley (O) 51, 469, 595
 Pregnancy, Common Bacterial Sexually Transmitted Diseases in (O) 75
 Professional or Commercial (E) 388
 Purdy, Harold D. (R) 105

-R-

Radiological Case of the Month:
 Blastomycosis Osteomyelitis with Epidural and Retropharyngeal Abscess (O) 253
 Blue Toe Syndrome (O) 517
 Cystic Adenomatoid Malformation (O) 469
 Diaphragmatic Hernias (O) 639
 Ductal Carcinoma in Situ (O) 415
 Intracapsular Implant Rupture (O) 51
 L3 Posterior Element Metastasis (O) 353
 May-Thurner Syndrome (O) 141
 Post-traumatic Degenerative Change of the Cervical Spine (O) 93

Pulmonary Alveolar Proteinosis (O) 307
 Radial Head Fracture (O) 189
 Spontaneous Intracranial Hypotension (O) 595
 Recent Advances in Pediatric HIV (O) 165
 Recent Measles Outbreak in Arkansas, A (O) 159
 Relationship of Episiotomy to Third and Fourth
 Degree Lacerations, The (O) 447
 Resolutions 57, 104, 309, 521
 Rhodes, Frank (OB) 193
 Richardson, Derrick L. (O) 173
 Robbins, Kenneth V. (O) 141
 Roberts, Jon (O) 517
 Robinson, Brent (O) 295
 Rogers, Henry N. (OB) 104
 Role of International Normalized Ratio (INR) in
 Clinical Practice, The (SP) 178
 Roman, Kathleen M. (SP) 125
 Ross, Robert W. (OB) 521 (R) 641
 Runyan, William Alfred (OB) 472 (R) 521
 Rusher, A. H. (O) 122

-S-

Saarnio, David A. (SP) 222
 Saltzman, Ben N. (E) 156, 484
 Sanchez, Nena (O) 447, 617
 Sanderson, Bruce M. (O) 141
 Schoettle, Glenn P. (OB) 472
 Schutze, Gordon E. (O) 159, 623
 Scurlock, Bill (SP) 334
 Sequin-Calderon, Rosey (E) 209
 Sexually Transmitted Diseases in Pregnancy, Common
 Bacterial (O) 75
 Shearer, F. E. (OB) 146
 Slate, John R. (SP) 222
 St. John, Greg (O) 81
 Stacy (E) 116
 Stair, Michael (O) 415
 Stallings, Joe (SP) 213
 State Health Watch 47, 84, 132, 181, 244, 297, 345, 405,
 455, 509, 589, 633
 Steephen, Anita (O) 119
 Stroehlein, Kristina (O) 119
 Swindoll, Bryant S. (R) 105

-T-

Talley, J. David (O) 41, 81, 129, 173, 240, 295, 341, 401,
 453, 507, 587, 629
 Texter, E. Clinton (OB) 104 (R) 105
 Things to Come 59, 107, 147, 195, 257, 314, 358, 426,
 473, 522, 598, 642
 Tucker, Nancy C. (O) 165

-U-

Update: Newborn Screening for Galactosemia (O) 539

-W-

Walk Together, Talk Together (E) 484
 Walls, Edwina (SP) 520
 Wendel, George D., Jr. (O) 75
 Wendel, Paul J. (O) 75
 West, Robert (O) 329, 501, 539
 What's This About? (E) 204
 Winn, Charles Robert, Jr. (OB) 641 (R) 641
 Winters, John Charles (OB) 357

-Y-

Yaseen, Mohammad (O) 390
You and the Law The Domestic Abuse Act: The
 Physician's Role (SP) 218
 Yount, Sheila (SP) 497

-Z-

Zeno, Z. Lynn (SP) 71

Arkansas Medical Society

Index of New Members 1995-1996

Volume 92, Numbers 1 - 12

-A-

Abraham, Dana Carol 463
 Adam, Walter M. (Res.) 252
 Adametz, Kimberly Grimes 186
 Adametz, John H. (Res.) 187
 Adler, Ira N. (Res.) 304
 Agronin, Irina Z. (Res.) 304
 Akkad, Nabil 351
 Al Mounajed, Ghanem 351
 Al-Ghussain, Emad A. M. M. 351
 Albey, Mark Edward 303
 Alfano, Thomas Gene (Res.) 140
 Alhariri, Mirfat 138
 Allen, John Melvin 411
 Allen, William West (Student) 304
 Allgood, John W., Jr., (Res.) 90
 Angtuaco, Edward Elmer 303
 Antle-Vlach, Victoria Jane 515
 Arnold, Emily Brooke (Student) 304
 Asi, Wael 463

-B-

Baho, Haysam 139
 Bakhtawar, Iram (Res.) 515
 Banerjee, Pushpal R. (Res.) 252
 Barrett, Rebecca Lynn (Res.) 20
 Barsik, Tamara 351
 Bauknight, Nichole Michelle (Res.) 90
 Baumwell, Sterling Howard 594
 Baxter, William K. (Res.) 90
 Bean, Brian Terry (Student) 515
 Beck, Jason R. (Student) 304
 Beck, William Arthur 303
 Bennett, Chris Neville 515
 Berry, Michael 90
 Berry, Michael Fred (Res.) 464
 Billingsley, John A., III, 90
 Bingham, D'Andra D. (Student) 304
 Blackmon, Douglas M. (Student) 304
 Blair, Susan D. 139
 Blakely, Brent Michael 411
 Bonner, Steven Hunter (Res.) 90
 Bonwich, Janina B. (Res.) 304
 Brand, Robert Lynn 515
 Brandt, Jason Coffman (Res.) 90
 Brashears, Clay B. (Res.) 90

Bratton, Nita Gail 90
 Brewer, Jonathan Keith (Res.) 90
 Brooks, Homer Edward 411
 Brown, Daniel K. (Student) 304
 Bryan, Yvon F. 303
 Bryles, Robert Samuel 252
 Buckner, Amy Boast (Res.) 90
 Bugbee, William D. 252
 Burr, William Ethridge, Jr., (Res.) 90

-C-

Caldwell, Charles Robert (Res.) 352
 Calkins, Joe B., Jr., 139
 Carey, Victor Frank 138
 Carino, Richard (Res.) 252
 Carrick, Garreth 464
 Carrico, John David 139
 Carroll, Barry Scott 139
 Cash, David Lee (Res.) 187
 Cathcart, Evelyn Louise 186
 Ceola, Wade Matthew (Res.) 90
 Chavin, Michael Alan 411
 Chediak, Gregory 50
 Cherny, W. Bruce 186
 Chitwood, G. Glen 139
 Chu, Victor S. 252
 Cisneros, Teresa C. (Res.) 187
 Clardy, Bryan H. (Student) 304
 Clogston, Charles William 252
 Cobb, Joel Christopher (Student) 352
 Cole, Richard W. (Student) 304
 Colwell, Karen Louise 411
 Concepcion, Maria Cecilia L. 351
 Conway, Warren Lee (Res.) 90
 Cooper, Kara (Student) 304
 Cooper, Keith Whittington (Res.) 252
 Corcoran, Gavin Richard 187
 Crafton, Eugene Middleton (Res.) 304
 Cummins, Thomas Hunt 138
 Cunningham, James A. 139

-D-

Dang, Stuti (Res.) 304
 Danks, Kelly Richard 252
 David, Alex Stanley 411

Davis, Marc Jason (Res.) 140
 Dawson, Justin Drew (Student) 304
 de Mondesert, Eduardo Antonio 351
 Deen, Lewis Stanley 351
 DeHaan, Jeffrey T. 50
 Devabhaktuni, Nalini (Res.) 304
 Dharamsey, Shabbir A. 351
 Diamond, Corey Lynn (Res.) 90
 Dickinson, Rodger Combs, Jr., 411
 Dibble, Tim David (Student) 352
 Dinulescu, Stefan Dan 351
 Duffield, Robin Pilgram (Student) 304
 Dunn, James R. (Res.) 140
 Dykman, Kathryn Donita 303

-E-

Eads, Cheryl Annette (Student) 304
 Economides, Nicholas (Out of State) 140
 Edrington, David C. 638
 Ekanem, Felix M. 186
 Elian, Samir A. 138
 England, Lane (Student) 352
 Erwin, John Scott (Res.) 90
 Eskandar, Ziad 411
 Ewing, Donald C. 464
 Eyre, Marion Donald (Res.) 412

-F-

Farajallah, Awny Samaan Botros (Res.) 304
 Farst, Karen J. (Res.) 90
 Ferguson, Max Ann (Res.) 304
 Ferguson, Scott Frazier (Res.) 90
 Ferguson, Susan Portis (Res.) 90
 Ferrell, Amanda J. (Res.) 90
 Fink, Roger Lee, II, (Res.) 50
 Fischer, Michael Christian (Res.) 91
 Fiser, Debra Henry 411
 Fitzgerald, Amy Jean 463
 Flick, Julie Lynn (Student) 304
 Flippin, Dane Howard (Res.) 91
 Florez, James Patrick 139
 Fort, David B., Jr., 464
 Foscue, David John 303
 Fraiss, Michael A. 50
 Fulmer-Massey, Laura Anne (Student) 352

-G-

Garcia-Rill, Susan Ebel 463
 Garner, Barry Matthew 594
 Garrett, Nina N. 411
 Gati, Kenneth Gregory (Res.) 91
 Goodson, Timothy C. (Res.) 91

Gordon, Gayle S. (Student) 352
 Graham, Missy (Res.) 352
 Graves, Blane Alan (Student) 304
 Green, Cheryl Lynn (Res.) 304
 Gregson, Ann-Marie (Student) 304
 Grissom, David B. 186
 Guevara, John C. 139
 Guevara, Doyle Patricia (Res.) 304
 Guillermo, Enrique 463
 Guin, Jason William (Student) 352
 Guyer, Michael L. (Res.) 140

-H-

Haas, David Charles 252
 Habibipour, Saied (Res.) 304
 Hagaman, Michael Scott 252
 Hajiamiri, Majid (Res.) 304
 Hale, Arthur Edwin (Res.) 140
 Hale, Jeffrey A. 252
 Haley, Rhonda Michele (Student) 352
 Hall, Scott Alan 138
 Hamby, Jeffrey Duane (Res.) 140
 Hamilton, Herbert Edward 411
 Haney, Rondall Kevin 139
 Harper, William Lee 515
 Harrington, Gregory Scott 411
 Hatcher, Stacey L. (Res.) 515
 Hays, Debbie Ann (Res.) 91
 Hazar, Derya Bora 351
 Heaver, Holly M. 411
 Henderson, Vickie Lynn 252
 Higginbotham, Michael Shane (Res.) 252
 Hodge, Keith Ray (Res.) 91
 Holleran, John Richard (Res.) 187
 Hopkins, Karmen 139
 Hor, Kem (Michelle) Su (Res.) 304
 Horan, Michelle M. 138
 Horras, Randy Joseph (Student) 304
 Hou, Di (Res.) 352
 Howard, Charles E. (Student) 304
 Hronas, Theodore Ned (Res.) 140
 Hughes, Laurie O. 139
 Hunter, Karla Joy 303

-I-

Ibrahim, Manar S. A. 186
 Ibsen, Michelle Janette 638
 Ismail, Hassan M. 50

-J-

Jackson, Charles Andrew (Res.) 187
 Jackson, Kevin Thomas (Student) 304

Jeffrey, Jay Raleigh 138
 Johnson, David Lawrence 515
 Johnson, Michael W. (Res.) 304
 Johnsrude, Christopher L. 411
 Jonak, Hermann F. (Res.) 252
 Jones, Robert Eugene 138
 Josef, Stanley S. 351

-K-

Kamanda, Stella M. 463
 Kannout, Fareed 351
 Karas, Dean E. (Res.) 140
 Karassi, Malek S. 515
 Keenan, Patrick Aloysius (Res.) 304
 Keeter, L. Phil 303
 Keever, James E. 303
 Kefri, Maher 464
 Kempson, Steven Eugene (Res.) 91
 Kennedy, Robert Bruce 186
 Kerns, Kelly Lynne 463
 Khan, Gul R. 464
 Khassawneh, Basheer Yousuf (Res.) 304
 Kinney, Joyce 638
 Kirkland, Allan K. (Res.) 140
 Knight, Michael Vern (Res.) 352
 Knutson, David Lowell, II, (Res.) 91
 Kosuri, Ramakrishna Raju (Res.) 304
 Kriesel, Ben J. 303
 Kuykendall, Margaret Wood (Res.) 140
 Kuydendall, Scott Preston 252

-L-

Lasner, Jay Elliott 303
 Ledbetter, Johnny Roger, Jr., (Res.) 91
 Leek, Grif Alan (Res.) 140
 Lehmann, Lance Joseph 303
 Lemieux, John Geoffrey (Res.) 91
 Leslie, Sharron Johnson 411
 Lewandowski, Raymond Casimir, III, (Res.) 91
 Lewis, George Luke 138
 Lewis, Gregory James Stakesby 411
 Liebersbach, Brian Francis (Student) 412
 Lindsay, Herbert Lamar (Out of State) 252
 Lipsmeyer, Eleanor Ann 139
 Little, James Aaron 252
 Lloyd, Richard Alan 138
 Lorenzo, E. B. 515
 Lowther, Laura Marie (Res.) 140
 Lu, Eugene (Res.) 91

-M-

Maes, LouAnn Young 139

Maes, Stephen R. 252
 Major, Victoria Elaine (Student) 304
 Manavalan, Pius Louis (Res.) 352
 Marfatia, Vikram S. (Res.) 464
 Margaret, Heather (Res.) 140
 Marotte, Jeff B. (Student) 638
 Massey, Deborah Ann (Res.) 91
 Matlock, Rhonda J. (Student) 352
 Mawulawde, Kwabena 594
 Mazursky, Jon Eric 186
 McBride, Anthony Duane 139
 McCollum, Neesa Jill (Student) 304
 McCoy, Julia M. 186
 McCraw, Barry William 139
 McCrory, Kathleen A. (Res.) 304
 McDaniel, Lori L. (Student) 352
 McDonald, Rodney Keith (Student) 352
 McKinney, Vanessa Lynn (Student) 304
 McKinnon, L. Jane 351
 McGrath, A. Joseph, Jr., 303
 McMahon, Robert M. 139
 Meade, Arturo 186
 Menard, John Carlos 138
 Merritt, James Milton 186
 Meyer, Christopher Mark (Res.) 140
 Meyer, Lawrence Howard 90
 Mhoon, John Mark (Res.) 91
 Miller, George Givens 463
 Miller, Laurence Howard 90
 Milligan, Joel Christian (Student) 638
 Minnich, Thomas Edward 252
 Minton, Bryan H. (Res.) 140
 Mitchell, Banford Raye, Jr., 138
 Mitchell, Bruce Gregory (Res.) 352
 Mitchell, Trey (Student) 304
 Moody, Melody Lynne (Res.) 91
 Moore, Jesse Daniel (Res.) 412
 Moore, Kimberly Suzanne (Res.) 352
 Moran, Kevin M. 139
 Morehead, Kristen N. (Student) 412
 Morris, Robert L. 515
 Munshi, Medha N. 638
 Murphy, Sean Peter 411
 Murunyadzi, Perkins (Res.) 252

-N-

Nance, Melvin E. 594
 Nelson-Adesokan, Paula, M. 463
 Nichols, Roger D., II, 139
 Nguyen, Duong H. 186

-O-

Orange, Betty L. 351

Ortiz, David (Student) 304
Osborn, Daniel Roland 138
Osofisan, Olaniyi Olabode 90

-P-

Palmer, Kristine Gill (Res.) 412
Parham, David Marion 463
Parker, Melanie Ann (Student) 304
Parvin, Gregory Alan (Res.) 140
Paul, William Luther 515
Pearson, Fran R. (Out of State) 464
Peek, Richard D. 638
Perry, Evelyn S. 186
Phillips, Rebecca Plumlee (Res.) 187
Phillips, Tracy Thomas (Res.) 252
Phomakay, Von (Res.) 140
Price, Kevin Scott 303
Primack, Daren S. 303
Prince, John Robert (Res.) 304
Pritchard, Sharon Jamie 464
Puen, Roy L. 411
Purnell, Gary L. 303

-Q-

Quinn, Brian Dennis 303

-R-

Rafio, Shahioa (Res.) 252
Rahman, Holly Elizabeth 139
Ramanathan, Sundar Raman (Res.) 304
Ramsey, James Randall (Res.) 140
Rapp, Richard J. 139
Reis, Ivory A. 138
Rena, Diokson (Res.) 304
Rickey, Jean Mauch 138
Robinson, Dianna Lynne 638
Robinson, Matthew Miles 411
Rodgers, Benjamin Lee (Res.) 304
Roe, Diana Lynn (Student) 304
Romero, Alfred Thomas 463
Rose, Joseph G. (Student) 352
Rose, Steve (Res.) 91
Rouse, Kevin Glenn (Res.) 187
Rucker, Gari Mills (Res.) 140
Russell, Eric Brian (Student) 304

-S-

Samlaska, Susan 252
Sanders, Scott Mitchell (Res.) 91
Sarinoglu, Cem (Res.) 187
Schkade, Paul A. 186
Schmidt, David Allan 139
Schmitz, James 90
Seffense, Stephen Joseph 515
Shapter, Janet B. 50

Shaw, Allison Michelle (Res.) 352
Shaw, Collie Blevins 515
Sheikha, Mouhammed K. 138
Shen, Xingchu (Res.) 304
Sheppard, Julius K. 138
Shrestha, Shraddha Shilpa (Student) 304
Shurley, Floyd A., Jr., 351
Siddiqui, Sayyadul M. (Res.) 304
Siegel, David Samuel 303
Silver, Danny 140
Silzer, Robert R. 464
Simons, Roger D. 515
Simpson, Laura Katherine (Res.) 91
Simpson, Todd Richard 187
Singh, Baldev (Res.) 304
Sites, Terry J. 50
Smith, Vestal B., Jr., 139
Snow, Sandra L. 594
Sokolyk, Stephen Michael, 351
Sorenson, Marney Keith (Res.) 515
Speer, Christine Elise (Student) 304
Spohn, Peter John 50
St. John, Melody D. (Res.) 304
Stanford, Royce Allan, Jr., 351
Steinert, Dejka M. (Student) 304
Stellpflug, Bradley Steven (Res.) 187
Stewart, Jason G. (Student) 304
Stocks, Rose Mary (Out of State) 464
Strebeck, Sarah Lois 411
Suasin, Winlove Bonpua 90
Suffridge, Phillip John (Student) 304
Swindle, David R. (Student) 304

-T-

Tackett, Lee 252
Tanner, Paul Russell (Out of State) 252
Tapley, David R. 463
Taylor, Juanita "Lynn" 411
Tharrington, Christopher Leslie (Res.) 50
Thompson, Jerome Walter 638
Thompson, Rodney Lee (Res.) 187
Tilley, James Bradley (Student) 304
Tisdale, Bernard Alvan 138
Tolosa, Elizabeth Callejo 90
Trevillyan, M. Jeanine (Res.) 187
Troxel, Roger L. 303
Trussell, Anne Rowland 139
Turner, Marisa Alyce (Student) 304

-V-

Vallery, Samuel Wilson 186
Van Hemert, Rudy L. 139
Vanderpool, R. Douglas (Res.) 140
Viner, William Edward (Res.) 140
Vogan, Cheryl L. 463
Vogler, Carolyn E. (Student) 304

-W-

Wait, Erik Jon 464
Waldron, James Alex, Jr. 638
Walker, Brent Lee (Res.) 187
Walker, Kimberly Anne (Student) 304
Wang-Gillam, Andrea (Student) 304
Ware, Gerald Thomas (Res.) 140
Warren, Edward Taliaferro 186
Washington, Mitzi Ann 463
Waterhouse, Michael Henry 463
Watermann, Eugene 138
Watson, Robert Allen (Res.) 187
West, Joseph Robert 594
Westbrook, September Ann 90
Westerfield, Robert E. 464
Westwood, John J. 50
Weyrich, Randall P. 351
White, Bradley Allen (Res.) 91
White, Richard Alexander (Student) 304
Williams, Anthony Wayne 186
Williams, Robert S. (Res.) 187
Williams, Victor Bernard (Res.) 304
Wilson, Cynthia R. (Res.) 140

Wilson, Patricia J. (Res.) 352
Wilson, Timothy Alan 463
Wise, James N. (Student) 515
Wood, Michael David 90
Wood, W. Rebecca 186
Woods, Cecilia L. (Student) 352
Woods, Mark Allen (Student) 304
Woodard, Eric A. (Res.) 91
Woodson, Mark Robert 186
Workman, James Leonard (Student) 304

-Y-

Yaseen, Mohammad 139
Yazdani, Aijaz Ahmed 139
Yee, Suzanne W. 186
Yoser, Seth Leigh 138
Young, Evelyn Weatherford 463
Yuskevich, Jeffrey Steven (Res.) 352

-Z-

Zhou, Tong Gao (Anthony) (Res.) 304
Zimmerman, Stacy C. (Student) 304

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Advertising Agencies in italics

AMS Benefits	inside back
Arkansas Blue Cross & Blue Shield	655
Arkansas Managed Care Organization	610
Autoflex Leasing	inside front
Consumer Quote USA	628
Freemyer Collection System	635
Medical Protective Company	627
<i>Williams Marketing Services</i>	
The Paul Revere Life Insurance Company	622
Riverside Motors, Inc.	616
<i>Benson/Smith Advertising</i>	
Snell Prosthetic & Orthotic Laboratory	back cover
<i>Strategic Marketing</i>	
State Volunteer Mutual Insurance Company	606
<i>The Maryland Group</i>	
U.S. Air Force	638
<i>BJK&E Specialized Advertising</i>	
U.S. Air Force Reserve	605
<i>HMS Partners, Inc.</i>	



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